Petition

81-1054

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No. A-265

IN THE

Supreme Court of the United States

October Term, 1981

BP OIL, INC. and SOHIO PETROLEUM COMPANY,
Petitioners,

v.

BANKERS TRUST COMPANY, et al.

PETITION FOR WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE THIRD CIRCUIT

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QUESTIONS PRESENTED FOR REVIEW

1. Did the Court of Appeals err in dismissing the cross-appeal of BP Oil Inc. and Sohio Petroleum Company (hereinafter BP/SOHIO) on the basis of lack of appellate jurisdiction where the District Court made specific findings regarding the negligence of BP/SOHIO in its opinion, from which the appeal was taken, but where these findings were not formally set forth in a separate order of the District Court?

2. Whether the Court of Appeals erred in failing to apply the rule enunciated by this Court in *City of Milwaukee, et al. v. Illinois and Michigan*, — U.S. — (1981), to hold that the Port and Waterways Safety Act (33 U.S.C. § 1221-32; 46 U.S.C. § 391a) pre-empted the imposition of liability on BP/SOHIO based on common law negligence?

3. May a vessel owner, in the exercise of due diligence, delegate complete responsibility for the investigation of incidents which indicate inadequate vessel performance to another, taking no part in that investigation itself, and not be bound by the negligence of the delegee?

4. May a vessel owner ignore its own records, which reveal unseaworthiness, and still be permitted to limit its liability?

5. Did the Court of Appeals improperly allow Bankers Trust and Monsanto to limit their liability, when neither party offered any evidence on the issue of its lack of privity and knowledge and, therefore, totally failed in their burden of proof?

PARTIES

BP Oil, Inc. and

Sohio Petroleum Company [1]

Bankers Trust Company, owner, Monsanto Company, charterer, and Keystone Shipping Company, operator of the chemical tanker EDGAR M. QUEENY

Villaneuva Compania Naviera, S.A., former owner of the tank vessel CORINTHOS

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1. BP Oil, Inc. and Sohio Petroleum Company are wholly owned subsidiaries of the Standard Oil Company (Ohio), a publicly owned company. On December 23, 1977, the name of the Sohio Petroleum Company was changed to Sohio Natural Resources Company, which, in turn, was renamed Sohio Alaska Petroleum Company on December 31, 1979. In excess of 50% of the common stock of the Standard Oil Company (Ohio) is owned by British Petroleum (Overzee) B.V., a Dutch company which is a 100% owned subsidiary of British Petroleum B.V., a Dutch company, which in turn is a 100% owned subsidiary of BP Trading, Ltd., a British corporation, which is a 100% owned subsidiary of the British Petroleum Company, Ltd., a publicly owned British company.

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THE OPINIONS BELOW

The opinion of the Court of Appeals for the Third Circuit is reported at 651 F.2d 160, and appears in the Appendix at A1. The Order of that Court amending its opinion and judgment appears in the appendix at A33. The order of that Court denying rehearing appears in the Appendix at A68. The order of that Court denying petitioners' Motion for Clarification appears in the Appendix at A66. The Memorandum Opinion and Order of the District Court for the Eastern District of Pennsylvania is reported at 503 F. Supp. 337, and appears in the Appendix at A35.

JURISDICTION

The judgment of the Court of Appeals was entered on May 15, 1981. A timely petition for rehearing was denied on July 8, 1981. An order extending time to file a petition for writ of certiorari until and including December 5, 1981 was signed by Associate Justice William J. Brennan Jr. on September 30, 1981. A motion for clarification of the opinion of the Court of Appeals was denied on November 10, 1981. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

STATUTES

The Port and Tanker Safety Act of 1978
33 U.S.C. §§ 1221, 1222, 1225, 1228, 1230, 1231, 1232
46 U.S.C. § 391a

Limitation of Liability Act
46 U.S.C. § 183

The text of the above statutes appears in the Appendix at A71.

STATEMENT OF THE CASE

Original federal jurisdiction of this matter arises under 28 U.S.C. § 1333(1).

This admiralty action arose out of a tragic accident in which the chemical tanker S.S. EDGAR M. QUEENY, owned and operated by Bankers Trust, Monsanto Company and Keystone Shipping Company (hereinafter called the QUEENY interests), struck the crude oil tanker S.S. CORINTHOS, owned by Villaneuva Compania Naviera, S.A. (hereinafter Villaneuva), which was moored to and discharging her cargo at a terminal operated by petitioner BP Oil, Inc. and owned by petitioner Sohio Petroleum Company. The CORINTHOS exploded and burned, killing twenty-six persons, injuring others, and causing extensive damage to the BP/SOHIO terminal and other nearby property.

Shortly after the collision, the QUEENY interests filed a petition for exoneration from or limitation of liability, pursuant to the Limitation of Liability Act, 46 U.S.C. § 183. The District Court bifurcated the trial. Separate trials on the limitation of liability and damage issues were held. This appeal is taken from the decision of the Third Circuit Court of Appeals on the liability aspects of the case.[2]

Following the limitation trial, the District Court filed its opinion in which it ruled that the QUEENY interests were not entitled to limit their liability because shore management was aware, or should have been aware, of the damaged condition of the QUEENY's astern turbine, which resulted in reduced backing power. This damage was a contributing cause of the collision. The turbine

2. The damage issues have also been heard and appealed, and it is expected that other parties may seek to file petitions for certiorari from the Third Circuit's decisions on damages.

damage was caused by a defectively designed astern guardian valve, located upstream from the turbine. The valve deteriorated and generated loose metal particles, which in turn impinged on and damaged the turbine blading.

The District Court also found that BP/SOHIO were negligent under common law standards for failing to provide inert gas to the CORINTHOS during the vessel's discharging operation; however, it held that it was pre-empted by the provisions of the Port and Tanker Safety Act, 33 U.S.C. § 1221-1232; 46 U.S.C. § 391a, from imposing liability.

The QUEENY interests appealed the denial of their limitation of liability and the finding that the Port and Tanker Safety Act pre-empted the District Court from imposing liability upon BP/SOHIO. BP/SOHIO cross-appealed the finding of negligence.

The Court of Appeals reversed the District Court's decision on the right of the QUEENY interests to limit their liability and refused to consider either the QUEENY interests' appeal on pre-emption as to BP/SOHIO or the BP/SOHIO appeal on negligence. The grounds for this refusal was that the District Court had failed to enter a separate order as to the liability of BP/SOHIO. The Court of Appeals remanded the case to the District Court for proceedings consistent with its opinion.

Petitions for rehearing were filed by all parties and were denied. BP/SOHIO then filed a motion for clarification of what was meant by proceedings consistent with the appellate opinion. This motion was denied. This petition follows.

REASONS FOR GRANTING THE WRIT

1. The Court of Appeals Had Appellate Jurisdiction and Should Have Decided BP/SOHIO's Cross-Appeal.

The limitation trials in 75-364 (the QUEENY limitation proceedings) and 75-2110 (CORINTHOS limitation proceedings) were consolidated for trial. At that trial, the question of BP/SOHIO negligence was at issue. In addition to deciding the limitation issues raised by the shipowners, the District Court, in its opinion, held that BP/SOHIO were negligent for failing either: (1) to prohibit vessels not equipped with inert gas systems from docking at their pier, or (2) to supply inert gas to vessels not so equipped. The District Court went on, however, to conclude that BP/SOHIO could not be held liable for the damages, since the Congress had enacted the Port and Tanker Safety Act of 1978 (codified at 33 U.S.C. §§ 1221-1232; 46 U.S.C. § 391a), which pre-empted the court from imposing liability.

The Court's order did not address BP/SOHIO, but rather, simply granted Villaneuva's petition for exoneration and denied the QUEENY interests' petition for limitation.

The QUEENY interests appealed the District Court's decision that it was pre-empted from imposing liability on BP/SOHIO. BP/SOHIO filed a cross-appeal attacking the findings of negligence.

The Court of Appeals refused to decide BP/SOHIO's cross-appeal because the District Court's order did not specifically mention BP/SOHIO, although the issue of BP/SOHIO's negligence and the application of the pre-emption doctrine to them was fully litigated and decided by the District Court in its opinion.

In refusing to decide the BP/SOHIO cross-appeal on the negligence issue, the Court of Appeals neglected an im-

portant issue in a case which had been tried for 6 weeks, was fully argued and fully briefed before the lower court. was specifically decided by the District Court, and was appealed by both parties. In so doing, the Court of Appeals ignored the rulings of this Court and of all the other Circuits (except the District of Columbia, in which there is no presently reported opinion on this issue).[3]

This Court, in *Bankers Trust Company v. Mallis*, 435 U.S. 381 (1978), considered whether the decision of a district court can be an appealable decision if not set forth in a document separate from the opinion. This Court concluded:

> Certainty as to timeliness, however, is not advanced by holding that appellate jurisdiction does not exist absent a separate judgment. If, by error, a separate judgment is not filed before a party appeals, nothing but delay would flow from requiring the court of appeals to dismiss the appeal . . . . Wheels would spin for no practical purpose. 435 U.S. 385-86.

This Court stated that the proper standard was whether ". . . the District Court clearly evidenced its intent that the opinion and order from which an appeal was taken would represent the final decision in the case." 435 U.S. at 387-88.

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3. *Bankers Trust Company v. Mallis*, 435 U.S. 381 (1978); *Giza v. Secretary of Health, Education, and Welfare*, 628 F.2d 748 (1st Cir. 1980); *Leonhard v. United States*, 633 F.2d 599 (2d Cir. 1980); *Caperton v. Beatrice Pocahontas Coal Company*, 585 F.2d 683 (4th Cir. 1978); *Escamilla v. Santos*, 591 F.2d 1086 (5th Cir. 1979); *Beukema's Petroleum Co. v. Admiral Petroleum Company*, 613 F.2d 626 (6th Cir. 1979); *U.S. General, Inc. v. City of Joliet*, 598 F.2d 1050 (7th Cir. 1979); *Gioia v. Blue Cross Hospital Service, Inc of Missouri*, 641 F.2d 540 (8th Cir. 1981); *Al-Kim, Inc. v. United States*, 610 F.2d 576 (9th Cir. 1979); *Stubbs v. United States*, 620 F.2d 775 (10th Cir. 1980).

In order to avoid needless wheel-spinning, the refusal of the Court of Appeals to decide the issue of BP/SOHIO's negligence should be vacated and the case remanded with instructions to decide the issue. The Third Circuit should be required to conform to the decision of this Court and of the other Circuits which have ruled on the appealability of an issue clearly and finally decided by a trial court, even if not set forth in a separate document.

2. On Remand, the Court of Appeals Should Be Instructed to Apply the Doctrine of Legislative Pre-emption as Enunciated by This Court.

After oral argument on this matter before the Court of Appeals, this Court decided *City of Milwaukee, et al. v. Illinois and Michigan*, — U.S. — , 68 L.Ed. 2d 114, (decided April 28, 1981), followed shortly thereafter, by *Middlesex County Sewage Authority v. Sea Clammers* — U.S. — , 69 L.Ed. 435 (decided June 25, 1981).

In both *City of Milwaukee, supra* and *Sea Clammers, supra*, the Supreme Court held that federal common law, which is created by federal courts pursuant to their Article III powers, is pre-empted by legislation enacted pursuant to the powers granted to Congress in Article I and supplemented by comprehensive federal regulations. The District Court had held that it was pre-empted from imposing liability on BP/SOHIO for common law negligence by the legislation enacted by Congress and regulations promulgated by the Executive. In reaching a contrary opinion the Court of Appeals totally ignored this controlling law.

The judgment of the Court of Appeals should be vacated and the case remanded for proceedings consistent with the rulings of this Court when the Court of Appeals considers the BP/SOHIO cross-appeal.

3. The Decision of the Court of Appeals Regarding the Vessel Owner's Duty to Use Due Diligence to Make Its Vessel Seaworthy Is in Direct Conflict With the Law in the Second and Ninth Circuits and With the Leading Decision of This Court.

The EDGAR M. QUEENY had two related material mechanical failures. The vessel's astern guardian valve,[4] was defectively designed and underwent a process called "galling", in which it broke apart and produced small, loose metal fragments. This shrapnel entered the astern turbine when the vessel's engine was placed in "reverse", or astern, mode. The metal pieces, driven by high-pressure steam, caused the second material failure, the damage to the astern turbine.

The District Court found that the valve was defective and caused the turbine damage. In turn, the turbine damage, which reduced the vessel's astern power, was held to be a contributory cause of the collision. The findings of defect and causation were not appealed. At issue are the questions of the privity or knowledge of the various QUEENY interests: Bankers Trust as owner, Monsanto as chartered owner, and Keystone as chartered owner and operator.

The District Court held that the QUEENY interests were given a number of indications, through various specific incidents, that there were problems with the valve or with the turbine. The District Court's opinion that the QUEENY interests were in privity was based, in part, on their failure to make a duly diligent investigation into

4. The astern guardian valve is on the steam line to the astern turbine immediately adjacent to the turbine. Its purpose is to prevent steam from entering the astern turbine when the turbines are turning ahead, which would cause severe damage to the astern turbine.

these incidents, any one of which would have revealed the turbine damage which robbed the vessel of astern power. The defect and damage would then have been repaired well in advance of the date of the collision.

The Court of Appeals reversed, finding that the vessel management should not be charged with privity or knowledge of the valve and turbine damage, because it ". . . made every reasonable effort necessary to assure the valve was properly repaired."

Conceptually isolating the turbine damage from the valve damage, the Court of Appeals reversed the District Court holding that the various incidents did not *collectively* give adequate notice of the *valve* damage. This decision completely misinterprets the District Court's decision.

The astern guardian valve jammed due to the defective design in 1970, shortly after the vessel was delivered. Keystone's management was aware of the problem, however, Keystone merely referred the problem to the shipbuilder. The yard did nothing to repair the valve or analyze the cause of the jamming, but still reported that the problem was corrected. Keystone failed to inquire into what the problem had been, how it had been corrected, or to ensure that it had, in fact, been repaired. The Court of Appeals held that Keystone had properly relied on the shipyard to correct the malfunction of the valve and to determine what had caused it.

The decision of the Court of Appeals is in direct conflict with decisions in the Second and Ninth Circuits and with the leading decision of this Court.

The Second Circuit Court of Appeals has held that a vessel operator who delegates a repair has a duty to follow up and determine that the repair has been performed properly. *In Re Flota Merchante Grancolumbiana, S.A.*, 440 F.Supp. 704 (S.D.N.Y., 1977), aff'd 573 F.2d

1290 (2nd Cir. 1977), cert. den. 436 U.S. 907 (1978); *The Perama,* 388 F. 2d 434 (2nd Cir. 1968).

The Court of Appeals for the Ninth Circuit has held that a vessel owner must use all reasonable means to obtain knowledge of what a prudent inspection would disclose. *Waterman Steamship Corp. v. Gay Cottons,* 414 F.2d 724, 732 (9th Cir. 1969).

This Court has held that the vessel owner must follow up to ensure that necessary precautions are taken, and may not rely on the vessel's crew. *Spencer Kellogg & Sons v. Hicks,* 285 U.S. 502 (1932).

The decision of the Third Circuit in this case allows management to divest itself of the duty of exercising due diligence to ensure that the vessel is seaworthy by merely delegating the task to someone else. This standard of care is unreasonable and must not be allowed to stand.

Further, the Court of Appeals misinterpreted the entire thrust of the case presented to it. The Court of Appeals held that the various incidents, which occurred over a number of years, did not give knowledge of the damage to the valve. This was not the point. Each of those incidents, taken separately, if investigated with due diligence, would have led to the discovery of the *turbine* damage.

The decision of the Court of Appeals must be reversed. The decision of the District Court, that limitation must be denied, based on the privity of management in failing to follow up the various incidents which, if investigated with due diligence, would have revealed the turbine damage, must be reinstated.

4. The Court of Appeals Based Its Opinion on an Unwarranted Assumption That the District Court Reviewed Data Not in the Record and Ignored the True Basis of the District Court's Decision; and, Most Importantly, Established a New and Unacceptable Standard for Shipowner Diligence in Reviewing Available Data.

One of the factors relied upon by the trial court to show Keystone's privity or knowledge of the turbine deficiency was the existence of RPM recorder tapes. These tapes were a continuous, contemporaneous recording of the engine orders and the propeller shaft response to these orders, and were periodically sent from the vessel to Keystone's offices.

The District Court expressly admitted into evidence two of these tapes: the tape of the vessel's sea trial, which established her performance capability; and the tape from the night of the collision. A side by side comparison of these two tapes revealed the shortfall in power caused by the turbine damage. The finding that the turbine damage contributed to the collision was not appealed. Testimony from Keystone's management acknowledged that the purpose of the RPM recorder tapes was to monitor the vessel's engine performance. The testimony revealed that these tapes were in the possession of Keystone's management, but were never reviewed. Therefore, Keystone had in its possession information which could have led it to discover the turbine damage.

The Court of Appeals held that the District Court erroneously reviewed the intervening tapes (between sea trial and the collision) or that portion of the report of Dr. Corlett on those intervening tapes, since neither the intervening tapes nor that portion of the report were in evidence. This assumes that the District Court did review

the tapes or that portion of Corlett's report; this assumption is unwarranted.

The intervening tapes were never entered into evidence. The District Court, however, had before it other evidence concerning information contained on the tapes. The testimony of BP/SOHIO's witnesses established that the valve and turbine damage, which caused the loss of astern power, occurred early in the life of the ship. Keystone witnesses acknowledged that the purpose of the tapes was to monitor engine performance, i.e., performance based on power available which is determined by the number of RPMs achieved. The District Court properly inferred from this evidence that, had Keystone management examined the intervening tapes, they would have seen the shortfall in astern power.

The District Court's inference was proper. It was supported by evidence in the record. Further, the burden of proof of lack of privity or knowledge is on the vessel owner. *Coryell v. Phipps*, 317 U.S. 406, 409 (1943); *Farrell Lines, Inc. v. Jones*, 530 F.2d 7, 10 (5th Cir. 1976). Keystone not only failed to introduce the tapes to rebut the inference, it strenuously objected to their admission. The trial court properly drew an adverse inference from Keystone's failure to produce the tapes. *The Philadelphia*, 44 F.2d 1 (3d Cir. 1930); *N.L.R.B. v. Evans Packing Co.*, 46 F.2d 193 (6th Cir. 1972); *International Union (U.A.W.) v. N.L.R.B.*, 459 F.2d 1329 (D.C. Cir. 1972).

The Court of Appeal's unwarranted dismissal of the content of the tapes as being of "minimum probative value", showed a complete misunderstanding or disregard of the duty of a shipowner to use all available information to monitor the performance of its vessels. *Waterman Steamship Corp. v. Gay Cottons, supra.* To the contrary, the underlying rationale of the Limitation Act is to permit the shipowner to limit its liability for the acts of the vessel's

crew, but to hold the shipowner fully liable for its own acts or omissions. The RPM tapes were a red flag, warning Keystone that the QUEENY was not performing properly. That flag was ignored.

Further, the Court of Appeals was unwarranted in stating that the District Court reviewed the intervening tapes or Dr. Corlett's report on what the intervening tapes revealed. The District Court made no such statement. What the District Court did state was that the intervening tapes did reveal that the time to achieve the astern RPM commanded had increased due to the turbine damage. Dr. Corlett did testify that the poor performance was ascertainable from a comparison of the two tapes in evidence. Keystone did testify that the purpose of the tapes was to record the engine performance. The reasonable inference drawn by the District Court was that Keystone could have compared any of the intervening tapes with the sea trial tape and learned of the loss of power. Keystone failed to offer the tapes to prove it did not have the means to obtain that knowledge. The District Court's conclusion was proper and in accord with maritime law on this issue.

The Court of Appeals has put a premium on ignorance. The Court of Appeals has held that, by creating a large bureaucracy, the shipowner may insulate itself from the duty to review that data which most clearly would reflect the performance of its vessel. Not only is this contrary to established law, it is a hazard to the safety of the men and equipment in this nation's merchant marine and the ports at which they call.

The Court of Appeals' decision on this issue must be reversed for two reasons. What was said in the opinion regarding the vessel owner's duty to review available data is wrong as a matter of law. Further, the opinion of the Court of Appeals ignores the basis on which the District Court decided the issue, while attributing to the District

Court a review of evidence which the District Court never stated it had reviewed. The Court of Appeals must be reversed and the District Court's opinion, denying limitation, reinstated.

5 Only Keystone Put on Evidence of Its Lack of Privity or Knowledge, Therefore, as a Matter of Law, the Court of Appeals Erred in Granting Limitation to Bankers Trust and Monsanto.

The burden of proving lack of privity and knowledge in a limitation case is on the shipowner. *Coryell v. Phipps, supra.* The QUEENY interests are three separate entities: Bankers Trust, Monsanto and Keystone. Each entity was required to affirmatively establish individually its lack of privity or knowledge. *In Re Long,* 293 F.Supp. 172 (S.D.N.Y. 1968), aff'd 439 F.2d 109 (2d Cir. 1971). No evidence was offered at trial by Bankers Trust or Monsanto on the issue of their lack of privity or knowledge. Since the District Court found that Keystone had privity, it did not reach the issue of the privity or knowledge of Bankers Trust or Monsanto. Although the issue was fully briefed, the Court of Appeals, in reversing the District Court, failed to distinguish between the evidence put on in Keystone's behalf, and the lack of affirmative evidence by Bankers Trust and Monsanto.

The Third Circuit's decision in this regard, which considers the three separate parties collectively, is directly contrary to the law in the Second Circuit. Resolution of the conflict is required. The Third Circuit must be reversed and each shipowning interest held to its proper burden of proof in limitation cases.

CONCLUSION

Left unreviewed, the Court of Appeals' opinion stands for the following:

1. The Court of Appeals may refuse to decide an appeal on a ripe issue that has been tried, briefed, and decided below, merely because the District Court has not expressed its decision, for a second time, in a separate order.

2. In the Third Circuit, federal legislation may not pre-empt the court's application of federal common law, despite decisions by this Court to the contrary.

3. A shipowner may totally delegate its duty to maintain its vessels and escape responsibility for a breach of that duty.

4. A shipowner may create a bureaucracy of paper, then ignore the records which graphically demonstrate inadequate performance of its vessels, and escape responsibility.

5. Despite the clear language of the Limitation Act and the decisions of this Court regarding a vessel owner's burden of proof, a vessel owner may be granted the right of limitation without offering any proof of lack of privity and knowledge.

The proper determination of these issues is crucial, not only to BP/SOHIO in this case, but to the entire shipping community. The writ should issue.

Respectfully submitted,

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Appendix.

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 80-1405, 80-1450, 80-1496

In the Matter of:

The Complaint of Bankers Trust Company As Owner-Trustee and Monsanto Company as Chartered Owner, and Keystone Shipping Co., As Chartered Owner and Operator of the S.S. EDGAR M. QUEENY, for Exoneration From and Limitation of Liability

and

VILLANEUVA COMPANIA NAVIERA, S.A., AMOCO OVERSEAS OIL COMPANY and AMOCO TRANSPORT COMPANY,
Third-Party Plaintiffs,

v.

BETHLEHEM STEEL CORPORATION, GENERAL ELECTRIC COMPANY and THE WILLIAM POWELL COMPANY,
Third-Party Defendants

Bankers Trust Company, Monsanto Company and Keystone Shipping Co.,
Appellants at No. 80-1405

BP Oil Inc. and SOHIO Petroleum Company, Claimants,
Appellants at No. 80-1450

Villaneuva Compania Naviera, S.A.,
Appellant at No. 80-1496

(D. C. Civil No. 75-0364)

Nos. 80-1494, 80-1495, 80-1497

In the Matter of:
Complaint of VILLANEUVA COMPANIA NAVIERA, S.A., Owner of the tank vessel CORINTHOS, for Exoneration From and Limitation of Liability

ROYAL GLOBE INSURANCE COMPANY,
Intervenor Pltf.

NATIONAL GRANGE MUTUAL INSURANCE COMPANY and INSURANCE COMPANY OF NORTH AMERICA

v.

BETHLEHEM STEEL CORPORATION and GENERAL ELECTRIC COMPANY and THE WILLIAM POWELL COMPANY,
Third-Party Defts.

BRITISH PETROLEUM, LTD.; B.P. OIL INC. and SOHIO PETROLEUM COMPANY,
Third-Party Defts.

Bankers Trust Company, Monsanto Company and Keystone Shipping Co.,
Appellants at No. 80-1494

BP OIL INC. and
SOHIO Petroleum Company, Claimants,
Appellants at No. 80-1495

Villaneuva Compania Naviera, S.A.,
Appellant at No. 80-1497

(D. C. Civil No. 75-2110)

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

Argued January 13, 1981

Before WEIS and HIGGINBOTHAM, *Circuit Judges*,
DEBEVOISE, *District Judge* *

(Filed May 15, 1981)

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* Honorable Dickinson R. Debevoise, United States District Court for the District of New Jersey, sitting by designation.

OPINION OF THE COURT

A. LEON HIGGINBOTHAM, JR., *Circuit Judge.*

This action is the result of a collision that occurred early on the morning of January 31, 1975 on the Delaware River in Marcus Hook, Pennsylvania. The collision took place when the chemical carrier S.S. EDGAR M. QUEENY (QUEENY), an American steamship, struck the crude oil tanker S.T. CORINTHOS (CORINTHOS), a Liberian steam tanker (owned and operated by Villaneuva Compania Naviera S.A. (Villaneuva)), as the CORINTHOS discharged a cargo of crude oil at the B.P. Oil Inc./Sohio Petroleum Company Terminal (BP/Sohio).[1] It resulted in the loss of 26 lives as well as other personal injuries, extensive damage to the terminal, the destruction of the CORINTHOS, oil pollution in the Delaware River, minor damage to the QUEENY, and damage to neighboring properties. The owners and operators of each vessel subsequently brought suit in admiralty, claiming that the other vessel was exclusively at fault and that they should be exonerated from liability or, in the alternative, that their liability should be limited.

The issues on appeal concern whether the district court erred with respect to the following: first, its denial of the petitions for limitation of liability filed by the owners and operators of the QUEENY (Bankers Trust Company (Bankers Trust), Monsanto Company (Monsanto) and Keystone Shipping Company (Keystone) (collectively the QUEENY INTERESTS)); and, secondly, its ruling that under the preemption doctrine, federal legislation precluded it from holding the owners and operators of either the CORINTHOS or BP/Sohio liable. We will

1. Sohio Petroleum Company is the owner/lessor of a pier and refinery facility at Marcus Hook, Pennsylvania. B.P. Oil, Inc. is the operator/lessee of the facility.

reverse each of those holdings. We find that Keystone's management was not privy to the cause of the accident and that the district court was not preempted from considering the liability of the CORINTHOS and BP Sohio. Moreover, we rule that the alternative finding of the trial court that the CORINTHOS was unseaworthy was in error.[2]

I.

The parties have saturated us with thousands of pages of transcript, hundreds of exhibits, a plethora of expert testimony and extensive briefs. This inundation of evidence may have been necessary for the trial court to make proper findings, but a landlubber's analogy might be more appropriate to put this case in context.

Every novice automobile driver knows that, by the laws of physics, when one seeks to make a U-turn in a small area where the space is less than the circumference required for the full turning arc of the car, the turn can be successfully maneuvered only with a series of forward and backward motions. On a river, where the area is not wide enough for a turn in one maneuver, a 180 degree

2. The parties have attempted to raise on appeal other issues related to findings made by the trial judge, with regard to the liability of BP/Sohio. Those issues are not before us, however, because the trial judge's order did not cover them, and, accordingly there is no final decree for purposes of either U. S. C. § 1291 or 28 U. S. C. § 1292(a)(3). In his order of February 19, 1980, the trial judge dealt only with the petitions for exoneration and limitation of liability filed by Keystone and Villaneuva and not those filed by BP/Sohio. There has been no rule 54b certification pursuant to the Federal Rules of Civil Procedure as to these claims, and no interlocutory decree in admiralty on the record pursuant to 28 U. S. C. § 1292(a)(3). Therefore, there is no appellate jurisdiction for these matters because they are not specifically covered by the formal order of February 19, 1980. See p. 30 *infra*.

turning process is an even more complex maneuver. The "roadbed" of the ship moves with the momentum of the tide. Ships have no brakes which can keep an unanchored vessel at a permanent standstill so as to avoid drifting and possible collisions. Thus, even an experienced captain of a ship must rely on professional pilots whose function on the ship is to aid the captain in making intricate turns, maneuvers and docking. In nautical terminology, we say that the pilot conns [3] the vessel. Tugs are often used to assist him in this process.

The instant case arises because in the process of making a 180 degree turn on the Delaware River, the purportedly experienced pilot of the QUEENY who conned the vessel made tragic errors of judgment. He failed to back and fill [4] enough and to use efficiently the tug that was assisting him in the turn.

Clearly the collision was attributable primarily to the pilot's and the captain's negligence in executing the 180° turn. On this appeal, the parties have not questioned the trial court's finding that the collision was also caused in part by the failure of the owners to correct a purportedly defective astern guardian valve—a vital component of the ship's engine mechanism. The question we must consider is whether the owners have privity or knowledge of this deficiency in the valve.

II. FACTS

The QUEENY is a single screw, steam powered tank vessel of 19,046 gross tons. It is 660.2 feet in length, 90 feet in breadth, and powered by a 15,000 horsepower steam turbine. It was designed and built during the late

3. Conn is a term that refers to the control exercised by one who guides or directs the movements of a ship.

4. Backing and filling is a maneuver used when a ship has to make a difficult turn.

1960's as a multiproduct chemical tanker by the Bethlehem Steel Corporation (Bethlehem) for Monsanto and it was delivered to Keystone as an operator in September of 1970. Pursuant to a subcontract with Bethlehem, its turbine set and controls were supplied by the General Electric Company (GE). GE subcontracted with the William Powell Company (Powell) for the manufacture of a marine astern guardian valve—a valve to be used in the turbine. As will be noted later, the functioning of this valve is of great importance in this litigation.

The CORINTHOS was a single screw, steam powered tank vessel of 30,705 gross tons. It was 723.7 feet in length, 106 feet in breadth and powered by a 17,000 horsepower steam turbine. On January 30, 1975, the CORINTHOS was moored at the BP/Sohio refinery dock on the Delaware River where it was discharging a cargo of crude oil. Across the river, the QUEENY was moored in Bridgeport, New Jersey in order to discharge part of its cargo.

On January 31, 1975, the QUEENY left port headed for the next discharge facility in Paulsboro, New Jersey. She was under the command of Captain Fay Kellog. Pilot Sverre Sorenson was at the conn of the ship. Both Captain Kellog and Pilot Sorenson had performed docking and undocking maneuvers on many occasions aboard the QUEENY. To proceed upstream to the next facility, they knew she had to make a 180° starboard turn. Visability was clear from eight to ten miles. The eastern half of the Marcus Hook channel was closed for dredging operations—reducing the channel width from its standard 800 feet to 400 feet and, therefore, making turning in the river considerably more difficult.

The captain and pilot were on the bridge at the time of the undocking maneuver. To undock, the QUEENY used its main engine and bow thruster, and its rudder was

hard left. The Tug Tanda 12, which had been engaged to help with the undocking, was located on the port bow. Pilot Sorenson was at the Conn and in radio communication with the tug.

When the vessel had cleared the dock, the QUEENY began backing and filling. To do this, it used a series of astern and ahead maneuvers in conjunction with the vessel's rudder, the bow thruster, and the tugboat. This facilitated the starboard turn of the vessel and positioned her to go upstream. Both the captain and pilot knew the eastern half of the channel was closed.

To assist in the turning maneuver, at the early stages, the Tug Tanda 12 pushed at the QUEENY's port bow. Before the attempt to turn was completed, the QUEENY backed and filled at least twice to prepare for it. Tug Tanda 12 was then released from the port bow and instructed to stand by in Paulsboro, New Jersey. Captain Kellog was on the starboard wing of the bridge and Pilot Sorenson was on the port wing.

When the tug was released the vessel's capacity to turn dramatically decreased, but Captain Kellog was not alarmed. He expected Pilot Sorenson to make additional back and fill maneuvers as he had done on many other occasions in similar situations. The QUEENY's forward acceleration, however, actually increased and, consequently, the captain grew apprenhensive, feeling that the QUEENY might not clear the CORINTHOS due to the pilot's failure to continue to back and fill. He voiced his concern about the "closeness" of the situation, but the pilot replied, "Captain, she should make that o.k." Later, Captain Kellog again voiced his concern stating that they should go astern because they would be very close on the maneuver. When Pilot Sorenson did not respond, Captain Kellog became quite alarmed about the proximity of

the QUEENY to the well lighted CORINTHOS and he gave a "full astern" order. The third mate rung up the order on the engine telegraph. It was promptly acknowledged and then executed by the first assistant engineer. Then, Pilot Sorenson ordered a "double jingle." This order was received and promptly acknowledged by the engine room, but it had no effect on the operation of the engines because the first assistant engineer had already opened the throttles as far as he felt they safely could be opened. Accordingly, the rate of the QUEENY's turn to the right was reduced as the propellor responded to the full astern order.

The bow of the QUEENY continued to ease closer to the CORINTHOS, and the pilot, as a result, recommended that the starboard anchor be dropped. It seems that Captain Kellog acquiesced to this recommendation, because he ordered it via his walkie-talkie. No response to Captain Kellog's order was received, however, because the bow lookout, Arvie Harris, stationed at the windlass anchor watch position, had fled the extreme bow in the face of the impending collision.

Shortly thereafter the QUEENY crashed into the CORINTHOS. The initial contact produced sparks as the two ships scraped one another. The shock of this contact caused both ships to roll and pitch, and the vessels collided intermittently. The port fluke anchor of the QUEENY punctured the port shell plating of the CORINTHOS's No. 4 and/or No. 5 cargo tanks, resulting in a series of explosions and then a fire.

The fires and explosions aboard the CORINTHOS were out of control throughout the early morning hours of January 31, 1975, and caused the ship to break in half and sink, which resulted in extensive damage to the dock, oil pollution in the Delaware River, damage to neighbor-

ing properties, and the loss of 26 lives as well as other personal injuries.[5]

Keystone, the owners and operators of the QUEENY, and Villaneuva filed petitions for exoneration from or limitation of liability, Civil Action Nos. 75-364 and 75-2110, pursuant to the Limitations of Liability Act, 46 U. S. C. § 183 *et seq*. This act, in pertinent part, provides as follows:

> The liability of the owner of any vessel . . . for any . . . loss, or destruction by any person of any property, goods, or merchandise shipped or put on board of such vessel, or for any loss, damage, or injury by collision, or for any act, matter, or thing, loss, damage, or forfeiture, done occasioned or incurred, without the privity or knowledge of such owner or owners, shall not . . . exceed the amount or value of the interest of such owner in such vessel, and her freight then pending.

46 U. S. C. § 183(a). Keystone and Villaneuva were damage claimants in each other's limitation proceeding, along with all those who suffered injury or loss.

On the second day of trial, the attorney for Keystone wisely admitted that his client no longer sought exoneration but merely pressed for the limitation of his liability. The district court, sitting without a jury, examined the

5. Several proceedings were instituted relating to this accident. The personal injury and wrongful death actions were settled and dismissed. BP/Sohio filed a products liability action against Bethlehem, GE, and Powell. *See* D. C. Civ. No. 77-2362. The defendants in that suit all have been involved, in one way or another, in designing and constructing the QUEENY, her astern guardian valve and her turbine set and controls. At trial, that action was severed and stayed pending the resolution of the limitation actions. The suit by BP/Sohio against Villaneuva, the owners and operators of the CORINTHOS, was also severed. *See* D. C. Civ. No. 75-1285.

issues raised in the limitation of liability petitions and the contrary claims made by the three major parties. The issue of damages was bifurcated with respect to the question of liability. In a memorandum opinion dated February 19, 1980, the trial court ruled that Keystone's petition for limitation of liability would be denied, and that Villaneuva's petition for exoneration from and limitation of liability would be granted.

III. KEYSTONE'S PETITION TO LIMIT ITS LIABILITY

Since March 3, 1851, federal legislation, under certain circumstances, has permitted a shipowner to limit his liability to the value of the specific ship involved in an accident.[6] Thus, "even where a ship or fleet of ships is owned by a corporation, the privilege of limitation will insulate the remaining corporate assets from claims to which they would otherwise be subject." *See* G. GILMORE & C. BLACK, THE LAW OF ADMIRALTY, 818 (2d ed. 1975) (GILMORE & BLACK). Many assert, as the QUEENY INTERESTS have, that the purpose of the limitation act is to promote competitive United States shipping by reasonably fixing investors' liability to the value of the vessel placed in trade and that "the Act was passed to encourage investment at a time when American shipping was struggling to become commercially competitive and that [that] condition is just as valid in the United States today as it was . . . when the Act became law." Bankers Trust brief at 12.[7] Others assert

6. The Limitation of Liability Act, Chap. XLIII, Thirty First Cong. Sess. 11 Mar. 12, 1851, 9 Stat. 635 (1851), 9 Stat. 635 (1851), (codified at 46 U. S. C. §§ 181-189.)

7. Professors Gilmore & Black observe as follows:

> Senator Hamlin of Maine, Chairman of the Senate Committee on Commerce, who introduced the bill, presented it as merely an adoption of English legislation: "Why not give to those

that "[s]ince approximately 1930 the early enthusiasm, both legislative and judicial, for the limitation principal has cooled." GILMORE & BLACK at 821.[8]

Whatever may be the long term trend, in this case, as in most major calamaties, high stakes are involved in the granting or rejecting of Keystone's petitions for limitation of liability. Keystone placed a fund of $11,169,501 in the court representing the limitation value of the

7. (Cont'd.)

who navigate the ocean as many inducements to do so as England has done? . . . That is what this bill seeks to do, and it asks no more." Of the heart of the bill, sections three and four, he said: "These two sections are substantially the English law." Sen. Rantoul of Massachusetts was willing to give even greater assurance: "They (the British) have made the alteration which we are now asked to make and they have carried it further than this section of the bill carries it." Sen. Davis, from the same state, said: "It is simply placing our mercantile marine upon the same footing as that of Great Britain." 23 Cong. Globe 331-332, 713-720, 776-777, 31st Cong., 2d Sess. (Jan. 25, Feb. 26, March 3, 1851).

GILMORE & BLACK at 819 n. 5.

8. Professors Gilmore & Black have suggested as follows:

There is at least some reason to believe that the judicial attitude in the second half of the twentieth century will be on the whole hostile to the limitation idea, that the early cases will be whittled down if they are not flatly overruled, that the statute, even without further limiting amendments, will be narrowly and not expansively construed. Such an attitude reflects, it is suggested, not so much hostility to the shipping industry as a recognition of the fact that the Limitation Act, passed in the era before the corporation had become the standard form of business organization and before present forms of insurance protection (such as Protection and Indemnity insurance) were available, shows increasing signs of economic obsolescence.

GILMORE & BLACK at 822.

QUEENY while claims at that time were well above $40 million.

In support of its limitation of liability argument, Keystone asserts that the accident was caused solely by the negligent navigation of the QUEENY by Captain Kellog and Pilot Sorenson; that Keystone was without privity or knowledge of these negligent acts; and that, as a consequence, Keystone is entitled to limit its liability to the value of the vessel and freight on the ship at the time of the accident.

Villaneuva and BP/Sohio contend that Keystone is not entitled to have its liability limited because the QUEENY was unseaworthy and that its unseaworthy condition was a contributing cause of the collision. They maintain that the astern turbine on board the QUEENY was defective, and that it prevented the QUEENY from obtaining her full rated backing power prior to the accident. They submit that had the astern turbine functioned properly the QUEENY, notwithstanding the negligent acts of the captain and pilot, would have been able to avoid the collision with the CORINTHOS.

The district court found that the QUEENY's astern guardian valve and astern turbine were defective on the night of the accident and that these defective conditions were a contributing cause of the tragic collision. It ruled that Keystone should have known of this defective condition and held them in privity. Hence, it denied Keystone's petition for limitation of liability.

IV. THE RELATIONSHIP OF THE ASTERN GUARDIAN VALVE TO THE ASTERN TURBINE

Benjamin Franklin once wrote:

For the want of a nail the shoe was lost,

> For the want of a shoe the horse was lost,
> For the want of a horse the rider was lost,
> For the want of a rider the battle was lost,
> For the want of a battle the kingdom was lost—
> And all for the want of a horseshoe nail.

Similarly many of the parties assert that for the want of a proper functioning astern guardian valve the collision was caused.

Physically, the astern guardian valve is located on the main steam line just outside the steam inlet to the astern element of a low pressure turbine. It is the last valve the steam passes through before it enters the astern turbine. Its purpose is to protect the astern turbine from an accidental opening of the astern throttle valve when the turbine is turning forward RPM.[9] When the valve is open steam passes into the astern turbine and reverses the engine. If steam were accidentally released into the astern turbine while the turbine operated at full speed ahead, it would be seriously damaged.

The valve itself is a disc 5″ in diameter and 6″ high attached to the end of a stem. As the stem is raised or lowered (by a motor or handwheel), it moves up and down inside the valve body. The disc's bearing surfaces, which touch the valve body, are called guide surfaces. At normal room temperature, the clearances between the guide surfaces and valve body are 10-12/1,000ths of an inch. In this case, the disc and valve body were manufactured with the same material (ASTM-2176 grade WC6) (cast steel). Neither was treated to obtain differing degrees of hardness.

The valve operates when steam enters an inlet on its side and exits through a hole in its bottom. As the disc

9. RPM refers to revolutions per minute.

moves up and down, it is kept in position by the guide surfaces which come into contact with the valve's body. The stem obviously does not prevent contact between the valve's disc and body. It simply moves the disc up and down.

The valve's defect was caused by the galling or gouging of its surface due to the rubbing of two metal castings manufactured from the same grade of steel. This rubbing caused the surfaces to weld together, and, consequently, broke off pieces of the metal surfaces. This 'chiseling effect' allowed the steam in the valve to project pieces of metal into the astern turbine where they damaged the turbine's blades. This damage reduced the QUEENY's astern power. Thus, when Captain Kellog ordered full astern, the QUEENY's engines were unable to respond with its former full power.

The QUEENY's turbines were designed for normal sea use. They were guaranteed to produce an astern RPM equivalent to 70% of 109. If undamaged, therefore, they should have responded to the full astern command by producing 76.3 RPM. In fact on the QUEENY's sea trial run, they reached 76 RPM. On the day of the accident, however, they were unable to produce the guaranteed level of astern RPM. Hence, the court below found the QUEENY unseaworthy, and ruled that had the astern turbine functioned properly the collision between the QUEENY and the CORINTHOS would not have occurred.[10]

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10. The trial court adopted the CORINTHOS' extensive proposed finding of fact No. 87, which reads in part:

> If the vessel had achieved 76 RPM's astern on the night of the collision with an undamaged turbine and the RPM's were recorded on the night of the collision, there would have been no collision. (C-343, Line 5).

V. THE VALVE INCIDENT AND ITS LEGAL CONSEQUENCES

In reviewing the district court's finding of liability, the critical question we must address is whether the QUEENY INTERESTS had knowledge and privity of any defect in the astern guardian valve. Even if it is conceded that the valve was defective and that the collision was caused by the valve's defect, this alone does not constitute a basis to deny the QUEENY INTEREST'S petition to limit their liability. To constitute a per se basis to deny their petition, they must have had knowledge and privity of the valve's defect.

The statute provides that the owners' liability shall be limited to the "value of the interest" of the "vessel and her freight" for any act which occurs "without the privity or knowledge" of the owner. 46 U. S. C. § 183(a). In this case, therefore, the magic words are "privity or knowledge," for a shipowner is responsible for unseaworthiness of his vessel only if he has knowledge, or, in the use of ordinary care, should have knowledge of that condition. *Spencer Kellog & Sons, Inc. v. Hicks,* 285 U. S. 502 (1932); *Gibboney v. Wright,* 517 F. 2d 1054 (5th Cir. 1975); *Waterman Steamship Corp. v. Gay Cottons,* 414 F. 2d 724 (9th Cir. 1969); *China Union Lines, Ltd. v. A. O. Andersen & Co.,* 364 F. 2d 769 (5th Cir. 1966), *cert. denied,* 386 U. S. 933 (1967); *The Cleveco,* 154 F. 2d 605 (6th Cir. 1946).

In this respect, corporate shipowners, are held liable for the acts or knowledge of managing officers or supervisory employees. *Coryell v. Phillips,* 317 U. S. 406, 410-412 (1943); *Avera v. Florida Towing Corporation,* 322 F. 2d 155 (5th Cir. 1963); *Complaint of Allied Towing Corp.,* 409 F. Supp. 180, 188 (E. D. Va. 1976), *aff'd,* 580 F. 2d 792 (4th Cir. 1978). Usually, however, they

will not be held liable for the actions of crew members in the navigation or operation of the ship at sea. *In re Black Sea Steamship Company,* 382 F. Supp. 907, 911 (D. C. Canal Zone 1974). To hold Keystone privy, therefore, the evidence must show that some individual at the management level of Keystone had, or should have had, knowledge of the QUEENY's damaged astern guardian valve. BP/Sohio and the CORINTHOS bear the burden of proving negligence or unseaworthiness. Keystone, on the other hand, must demonstrate a lack of knowledge or privity to show that it is entitled to have its liability limited. *Farrell Lines, Inc. v. Jones,* 530 F. 2d 7, 10 (5th Cir. 1976).[11]

Under these precepts of law, what were the facts in this case which would justify the trial courts finding of privity or knowledge?

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11. In the lower court, BP/Sohio argued that there were numerous contributing causes to the collision: (1) the failure of Keystone's management to use due diligence to discover and remedy the damage to the astern turbine which reduced the QUEENY's astern power by 40% and rendered her unseaworthy; (2) Keystone's decision to give the captain the discretion to ignore company instructions to require an anchor watch to maneuver in congested waters—a decision that made it impossible to drop the anchors (which might have prevented the collision); and (3) the pressure placed on Keystone by Monsanto to cut costs which resulted in the failure to use bridge control and the premature relief of the bow detail without the posting of an anchor detail.

The CORINTHOS raised these same points. They also alleged that Keystone (1) failed to instruct the QUEENY's master and officers to use tugs during starboard turning maneuvers in confined or restricted waters; (2) failed to inform the QUEENY's captain and officers that the bow thruster power had been increased by the shipbuilder from 1200 to 1600 amps; and (3) failed to find out why the captain refused to perform a crash stop test and believed such a test would damage the vessel's propulsion system.

VI. THE TRIAL COURT'S FINDINGS

The district court found that the QUEENY's astern guardian valve and astern turbine were defective on the night of the accident and that this defective condition was a contributing cause of the tragic collision. It ruled that Keystone should have known of this defective condition and held them in privity. Thus, it denied Keystone's petition for limitation of liability.

The court below based its conclusion of privity and knowledge on the following findings. First, on or about September 14, 1970, more than four years before this accident and not long after the QUEENY had been delivered by Bethlehem, problems developed with the QUEENY's astern guardian valve. The court held that Keystone had notice of these problems. Second, the court ruled that Keystone would have discovered the defect in the astern turbine had it examined the RPM logger tapes. Third, it found that, in 1973, Keystone was negligent because it failed to determine the cause of the turbine damage on a sister ship of the QUEENY, and relate this information to the earlier problem with the QUEENY's valve. Finally, the court held that the QUEENY INTERESTS had a duty to follow-up on Captain Kellog's March 12, 1972 letter which purportedly revealed concerns about defects to the turbine. These findings of the trial court, of course, must be measured by the traditional standard in admiralty that they will not be set aside unless clearly erroneous. Fed. R. Civ. P. 52(a); *see McAllister v. United States*, 348 U. S. 19, 20 (1954); *SS Amazonia v. New Jersey Export Marine Carpenters, Inc.*, 564 F. 2d 5 (2d Cir. 1977).

A. THE ADVANTAGES OF HINDSIGHT

There is no vision which is as clear as hindsight. Images come into almost perfect focus through the evi-

dentiary microscope of a lawyer's hindsight. After thousands of daily and weekly occurrences of maritime life are discarded, the lawyer can isolate a few incidents for examination with such a microscope to document things such as privity or knowledge. This process proceeds as if a reasonable person had no other responsibilities or phenomena or events to observe other than those incidents now carefully isolated and focused on through this hindsight perspective. If life were so simple, foreseeability under the law would be the equivalent of omniscience.

We feel that the appellees in this case have built such a hindsight microscope slide—one that is patently divorced from reality. Scattered and isolated items taken out of context were presented to the court, and, surprisingly, the trial judge found a nexus of interrelationships to establish privity and knowledge. These findings defy the realities of life—even when recognizing a shipowner's undelegable obligation to correct equipment that is *known* to be defective. The most significant gap which the trial judge failed to appreciate involved a four-and-a-half-year span during which appellants at no time had any realistic notice that the astern guardian valve on the QUEENY was functionally defective.

B. THE MAIDEN VOYAGE

The QUEENY's maiden voyage was made in September of 1970 when, shortly after it was delivered, it traveled from Baltimore to Texas. On that voyage, the astern guardian valve malfunctioned when it either stuck or jammed in the closed position. When this happened, it became impossible for the steam to pass through to the astern turbine.

The valve usually is automatically operated by the limitorque motor—a motor that provides torque to open

or close it. This motor could not move the valve on the QUEENY's initial voyage. Each attempt to do so overloaded the electrical circuit and tripped the circuit breaker. The valve, however, was equipped with a handwheel that could be used to operate it manually. The QUEENY's first assistant engineer, Michael Breton, attempted to turn the handwheel after the malfunction. But he was unable to do so. Breton and Bethlehem's operating engineer, John Jensen, later were able to free the handwheel. They used a wrench (called a "cheater") to give them extra leverage so as to apply excessive force to the handwheel to open the valve.

The instruction manual for the astern guardian valve observes that a "cheater" must never be used on the handwheel. Furthermore, it states as follows:

> Excessive handwheel effort can indicate the following:
>
> > (1) improperly lubricated or damaged valve stem; (2) valve packing gland too tight; (3) improperly lubricated valve; (4) stem nut too tight on valve stem; (5) faulty or damaged valve parts.

Breton and Jensen, however, simply reset the limitorque circuitry to allow the valve to open and shut without further investigating what had caused the initial problem.

The QUEENY INTERESTS were informed of the problems with the valve on September 14, 1970, when the technical assistant to the vice president of Keystone, Samuel Spencer, sent an internal memo to Keystone's president, Adolph B. Kurz. Spencer also notified the Chief Guarantee Engineer, E. L. Insley, at Bethlehem, and Bethlehem listed the valve as an item for repair at the guarantee yard dry docking.

Bethlehem's "guarantee agreement" with Keystone required it to repair or replace any part or system on board the QUEENY that malfunctioned for reasons attributable to the builder. Vessel personnel were to notify both QUEENY management and the builder promptly when guarantee items needed to be repaired. Hence, on September 15, 1970, the day after Keystone learned that the astern guardian valve was sticking, it notified the proper Bethlehem representative of the problem. A Bethlehem Guarantee Engineer, Mr. McKendrick, met the QUEENY at her first northern port of call on September 20, 1970. On September 21, 1970, he reported that the valve was operating properly. At that time, therefore, Keystone had every reason to believe the valve was in working order because Bethlehem reported that it worked properly within only six days of notice of the problem.

The trial court held that the cause of the jamming and sticking of the valve in 1970 was not properly investigated, and that Keystone should have insisted on an inspection of the valve and turbine during the guarantee repair period. Yet, Keystone was told by the experts—Bethlehem, the company which built the ship—that the valve had been fixed, and for the next four-and-a-half years subsequent to this statement, it seemed to perform properly. Under these circumstances, the shipowner should not have been obligated to insist upon an inspection of the valve and turbine during the guarantee period. It makes no more sense to impose such a duty on a shipowner than it would to require a taxicab company to take a transmission apart on its new cab when the car's manufacturer had advised them that the new cab's transmission had been repaired and it worked properly after the original repair.

It is, of course, well settled that a shipowner has a duty to use reasonable means to acquire knowledge cal-

culated to inform him of conditions likely to produce or contribute to unseaworthiness. He must create reasonable procedures for identifying the need for repairs, and relaying reports of ship conditions to shoreside management, *See ARGENT*, 1940, A. M. C. 508 (S. D. N. Y. 1915). He must also enforce employee compliance with those procedures, *The Pennsylvania v. Troop*, 86 U. S. (19 Wall.) 125 (1873); *Avera v. Florida Towing Corporation*, 322 F. 2d 155 (5th Cir. 1963). Finally, he must use those procedures to keep abreast of ship conditions. *Spencer Kellog & Sons, Inc. v. Hicks*, 285 U. S. 502 (1932); *Complaint of Allied Towing Corp.*, 409 F. Supp. 180 (E. D. Va. 1976), *aff'd*, 508 F. 2d 792 (4th Cir. 1978).

In this light, in the instant case we hold, as a matter of law that the trial court erred because the record demonstrates that Keystone made every reasonable effort necessary to assure the valve was properly repaired.

C. THE RPM LOGGER TAPES

Secondly, the court below found that Keystone would have discovered the defect in the astern turbine had it examined the RPM logger tapes which monitor the revolutions per minute of the engine. In so finding, it held that Keystone had notice of a problem with the astern guardian valve, and, therefore, had a duty to monitor the turbine to assure it was unaffected by the earlier difficulties with the valve. The record reveals, however, that the RPM tapes, dating from the sea trials to the night of the collision, were excluded at trial. They were neither marked nor placed into evidence as an exhibit. The trial court admitted into evidence only the sea trial tape, and the tape for the day of the accident. The court did state that it would also consider the opinions testified about in court by Dr. Corlett with respect to the tapes. But, Dr. Corlett's testimony at trial, for the most part,

compared the performance of the QUEENY on the night of the collision with its performance during the sea trials. He nowhere expressed an opinion related to the performance of the QUEENY over her sea life from the time of the sea trials until the accident. We hold, therefore, that since the tapes were not in evidence it was error for the trial court to review that data and to attribute to Keystone the duty to have acquired that knowledge and to have acted upon it. We must note that even if the tapes had been admitted, they would have had minimum probative value if any.

D. PROBLEMS OF A SISTER SHIP

Thirdly, the district court found that Keystone was negligent because it did not properly investigate the cause of the turbine damage on a sister ship of the QUEENY in 1973, which purportedly would have alerted it to a defect in the QUEENY's astern guardian valve. In effect, the court held that due to an allegedly improper repair of another ship's, (the LIBERTY), "turbine," the defect in the QUEENY's "valve" was never found. Yet, the record nowhere indicates that the astern guardian valve on the LIBERTY was damaged in 1973. Nor is there any evidence that personnel on board the LIBERTY had ever experienced a problem with the astern guardian valve similar to the one experienced on the QUEENY.

Nothing in the record, therefore, supports the trial court's ruling that the damage discovered on board the LIBERTY should have caused Keystone to be concerned about damage on the QUEENY. Those attending the LIBERTY had determined that the damage to her turbine was the result of small bits of debris left in the steamline—which was a plausible explanation.[12] And were we to

12. It is not uncommon for such debris to stay in the propulsion system after the construction of a new vessel, and, thereby,

rule that negligence with regard to the repair of one vessel could be imputed to the operation of another ship that is involved in a collision over a year later, we certainly would be extending the notion of foreseeability beyond reasonable limits. Thus, we hold that it was error for the trial court to find Keystone negligent for failure to determine the cause of the turbine damage on the LIBERTY and relate that information to the QUEENY's earlier valve problem on its maiden voyage.

E. CAPTAIN KELLOG'S LETTER

Finally, the trial court found that Keystone should have known of the damaged condition of the QUEENY's turbine because Captain Kellog was reluctant to perform a crash astern test that was not required. The captain did write a letter to Keystone indicating he felt "such a test might damage the intricate and delicate propulsion system" on the QUEENY. But, he had not been ordered to perform the test. Rather, in 1972, Keystone had sent out Master's Circular No. 5565 which stated, in significant part, as follows:

> In general, crash stop data was recorded during Builder's trials before delivery of a new vessel or before redelivery after a major conversion. You will appreciate that an emergency crash stop is a severe exercise on both machinery and hull. It is not desirable to undergo such a strain unnecessarily. Therefore, *where this information developed by the Builder is available from your records, the emergency crash stop need not be repeated.* In this case, make the data readily available for reference.

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12. (Cont'd.)

damage the turbine blades. In 1973, the LIBERTY valve was opened for the first time. Hence, it was reasonable to assume that construction debris had caused the damage.

(emphasis added). Captain Kellog was on board the QUEENY during its sea trials, so he was well aware that this information was available in the ships records.

In any event, the Kellog incident took place in March 1972, about a year and a half after the valve sticking incident in 1970, and there simply is not enough evidence in the record to lead us to the conclusion that Kellog's letter was related to the valve problem, or that it should have led Keystone to the discovery of the problem with the QUEENY's valve.

In conclusion, isolated events, such as those discussed above, over such an extended period of time, do not place a shipowner on notice with respect to his vessel's alleged seaworthiness. In this regard, the courts must consider how many vessel activities are logged and monitored each day with respect to a vessel, let alone a fleet of vessels. The numbers are enormous. We find, therefore, that the separate and distinct events relied on by the trial court are, as a matter of law, not significant enough to support a ruling that Keystone had knowledge or privity of the acts of negligence on board the QUEENY, or her purported unseaworthiness.

VII. THE LIABILITY OF VILLANUEVA

The QUEENY INTERESTS assert that the owners and operators of the CORINTHOS were at fault because they did not inert its tanks. The trial court held that "the absence of inerting systems was a contributing cause of the damages," but it ruled that it would grant Villanueva's petition for exoneration of liability because it was preempted by Congress from finding it unseaworthy.

The record indicates that once an uninerted tanker has discharged a cargo of crude oil, it may be likened to a floating time bomb. Inerting is a process that fills the

cargo tanks of ships—when they are emptied of oil cargo during discharge—with inert gas rather than air which contains oxygen. This process reduces the likelihood of explosion or fire on such vessels because it prevents the build-up of fuel vapor which, when combined with oxygen, explodes when there is an ignition source.

Although the concepts of inerting is not new,[13] the CORINTHOS was not fitted with an inert gas system when it was built in 1963. Villanueva argues that the trial court was precluded from requiring it to have retro-fitted the CORINTHOS with an inert gas system prior to the accident of January 31, 1975 because Congress in October of 1978 enacted a specific schedule for the inerting of vessels like the CORINTHOS that does not require them to be inerted until June 1, 1983. The Port and Tanker Safety Act of 1978, Pub. L. 95-474, 92 Stat. 437, (codified at 33 U. S. C. §§ 1221-1232; 46 U. S. C. §§ 214, 391(a)) (the 1978 Act). Moreover, Villanueva maintains that the trial court improperly found that the CORINTHOS was unseaworthy since as of January 31, 1975, it had complied with all of the existing international treaties and American legislation prescribing tank vessel equipment for the prevention of explosion and fire. Lastly, it contends that, in any event, an inert gas system would have been unable to prevent the explosions that followed the collision.

> In relevant part, the district court held as follows: Though in 1975, no law required the inerting of cargo tanks on vessels the size of the CORINTHOS, we believe that at that time, the custom of the industry was insufficient to satisfy common law standards of care. However, the CORINTHOS interests are fortunate that Congress has entered this field of law,

13. Chevron inerted some of its ships as early as 1925.

thereby preempting the Courts from deciding this issue.

It was, however, a misapplication of the preemption doctrine for the district court to hold that it was preempted from considering a conflict between the federal legislature and the federal judiciary. The preemption doctrine, by definition, delimits the relation between the federal legislature and the states. Where the federal legislature regulates a particular area of conduct or activity with an eye toward maintaining uniformity among the states, no state may enact measures which circumvent the federal intent. *Gibbons v. Ogden*, 22 U. S. (9 Wheat.) 1 (1824).

The federal judiciary, on the other hand, is vested with the authority to interpret the acts of the legislature and executive within the limits prescribed by the Constitution. Within these limits, federal courts are not preempted from interpreting statutes, reviewing executive orders, or establishing common law standards of care merely because another branch of government has entered and regulated a sphere of conduct. And, certainly, in this circuit, industry standards and practices normally establish only minimal requirements, and do not create immunity from liability. Indeed, in *Voegele Company, Inc. v. OSHRC*, 625 F. 2d 1075, 1078 (3d Cir. 1980), we observed that

> other courts have evaluated the custom and practice of the industry as one aspect of the reasonable person test. These courts have refused to limit the reasonable person test to the custom and practice of the industry because "[s]uch a standard would allow an entire industry to avoid liability by maintaining inadequate safety . . . ." *General Dynamics v.*

> *OSHRC*, 599 F. 2d 453, 464 (1st Cir. 1979). We find this policy reason for not making industry standards determinative to be quite compelling. *See Cape & Vineyard Div. v. OSHRC*, 512 F. 2d 1148, 1152 (1st Cir. 1975) (in context of § 1910.132(a), "[t]here may . . . be instances where industry practice fails to take reasonable precautions against hazards generally known in the industry; in such event it may not be unfair to hold the employer to a standard higher than that of actual practice."); *Brennan v. Smoke-Craft, Inc.*, 530 F. 2d 843, 845 (9th Cir. 1976); *American Airlines, Inc. v. Sec. of Labor*, 578 F. 2d at 41.

We hold, therefore, that in precluding itself from considering the legislation in question in this case, the court below was in error. Furthermore, we rule that the district court's alternative finding that the CORINTHOS was unseaworthy was improper for the reasons that follow.

On October 17, 1978, Congress enacted the 1978 Act. This Act makes provisions for the inerting of existing tank vessels of the type, capacity, age and size of the CORINTHOS. In Section 391(a)(7)(f), it states that:

> an existing crude oil tanker of 20,000 deadweight tons or above, [should] not later than June 1, 1983, be equipped with an inert gas system.

The statutory history of this piece of legislation reflects an attempt to balance the various interests concerned with the safety of tanker operations. The House Report on the Port and Tanker Safety Act, H. R. REP. No. 95-1384-PART 1, 95th Cong. 2d Sess., *reprinted in* [1978] U. S. CODE CONG. & AD. NEWS 3270, 3271, states as follows:

> In considering corrective legislative action, the committee has kept itself informed of the ongoing activity in the international arena, particularly in the Inter-Governmental Maritime Consultative Organization (IMCO); and H. R. 13311 reflects, in part, certain requirements accepted internationally, as developed in the recent meeting of the International Conference on Tanker Safety and Pollution Prevention, held in London in February, 1978.

The 1978 Act. Further, the Senate Report on a related statute, the Port and Waterways Safety Act, S. REP. No. 2, 92d Cong. 2d Sess. 426, *reprinted in* [1972] U. S. CODE CONG. & AD. NEWS 2766, 2783, declares that

> [t]he committee fully concurs that multilateral action with respect to comprehensive standards for the design, construction, maintenance and operation of tankers for the protection of the marine environment would be far preferable to unilateral imposition of standards. However, standards are slow in coming from the multilateral forums . . .
>
> [Therefore] while the committee remains committed to the proposition that multilateral action in this area is preferable, it is not willing to sacrifice the objective of protection of the marine environment on the altar of that principal. Much more rapid and comprehensive action will be required if the United States is to continue to rely on multilateral forums. However, in the light of the preference for multilateral action shared by the administration and by the committee, provisions were adopted I. R. § 40 which attempted to resolve this dilemma, primarily thru the use of a deferral procedure.

In this light, the 1978 Act was a legislative response to a Presidential Message sent to Congress on March 17, 1977—a message with regard to the marine transportation of oil. In this message, President Carter recommended reforms in ship construction and equipment standards (including the requirement of inert gas systems on oil tankers over 20,000 deadweight tons). He hoped that these requirements would be "fully effective within five years." 123 CONG. REC. 7931 (1977).

Notwithstanding the President's hopes for the future, however, on January 31, 1975, the day of the collision, the CORINTHOS was in compliance with the existing international treaties, and United States legislative and regulatory requirements concerned with fire fighting and explosions. It complied with all the fire fighting and anti-explosion provisions of the Safety of Life at Sea (SOLAS) Conventions of 1948 and 1960.[14] Furthermore, in accordance with the SOLAS requirements, her owners had ensured not only that the vessel was equipped for fire fighting, but also that her crew was properly trained to fight fires. Finally, the CORINTHOS was also recognized by the American Bureau of Shipping (ABS) [15] to be seaworthy. Thus, we find it was clearly erroneous for the lower court to rule that the CORINTHOS was unseaworthy.

Over the years a series of laws and regulations have been enacted with regard to tanker safety so as to phase in equipment requirements for ships. Congress has determined after considering many factors, including ship-

14. *See* Safety of Life at Sea Convention, June 10, 1948, 3 U. S. T. 3450, T. I. A. S. No. 2495; and Safety of Life at Sea Convention, June 17, 1977, 16 U. S. T. 185, T. I. A. S. No. 5780.

15. The ABS is recognized by the United States Government as a government agency authorized to inspect and classify tank vessels 46 U. S. C. § 881.

yard capacity and the available technology, that five years should be allowed before the retrofitting of tankers over 20,000 deadweight tons becomes mandatory. Were we to impose liability on vessels before this time period is up, the Congressional timetable would be rendered useless. Hence, in this instance, we will be guided by the federal legislation developed by Congress.

VIII.

For the reasons stated above, we will reverse the district court with respect to its denial of the petition of limitation of liability to Keystone. Moreover, we will hold that the preemption doctrine is not applicable as to Villanueva. To the extent that the court made an alternative finding to deny Villanueva's petition for limitation of liability because it failed to use an inert gas system on the CORINTHOS, we will rule that the alternative finding was error as a matter of law. Of course, in admiralty, appeals from interlocutory decrees are permissible as a matter of statutory right.[16] In this case, there was no decree entered by the trial court as to the issues raised in the appeals filed by B.P./Sohio in 80-1450 and 80-1495, and, therefore, the appeals in those cases must be dismissed for lack of appellate jurisdiction. We remand the case to the trial court for further proceedings consistent with this opinion.

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16. *See* 48 U. S. C. § 1292(a)(3). *See also* 9 MOORE'S FEDERAL PRACTICE § 110.19[3], and 7B MOORE'S FEDERAL PRACTICE § 1292(a)(3).

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 80-1405, 80-1450, 80-1496

In the Matter of:
The Complaint of Bankers Trust Company, et al.
and Villaneuva Compania Naviera, S.A., et al.
v. Bethlehem Steel Corporation, et. al.

Bankers Trust Company, et al.,
Appellants at No. 80-1405

BP Oil Inc., et al.,
Appellants at No. 80-1450

Villaneuva Compania Naviera, SA.,
Appellant at No. 80-1496

(D.C. Civil No. 75-0364)

Nos. 80-1494, 80-1495, 80-1497

In the Matter of:
Complaint of Villaneuva Compania Naveria, S.A.,
etc., et al.; National Grange Mutual Insurance
Company v. Bethlehem Steel Corporation, et al. v.

British Petroleum, Ltd., et al.
Bankers Trust Company, et al.,
Appellants at No. 80-1494

BP Oil Inc., et al.,
Appellants at No. 80-1495

Villaneuva Compania Naviera, S.A.,
Appellant at No. 80-1497

(D. C. Civil No. 75-2110)

ORDER AMENDING OPINION

Present: WEIS and HIGGINBOTHAM, *Circuit Judges*, and DEBEVOISE, *District Judge* *.

Banker's Trust Company, as owner-trustee, has filed a motion for clarification of judgment—as to whether our reversal of the denial of limitation of liability to "Keystone" included also a reversal as to the denial of the limitation of liability to Banker's Trust Company and Monsanto Company. In our opinion at p. 29, we used the term "Keystone" in a collective sense as it was used in the joint brief of Banker's Trust, Monsanto Company and Keystone Shipping Company, wherein they stated that the three entities would "hereafter collectively [be referred to as] Keystone." Brief, p. 4. To eliminate any possible ambiguity.

IT IS ORDERED that the Slip Opinion of this Court filed May 15, 1981 be amended as follows:

Page 4, paragraph 2, line 6, "Keystone Shipping Company (Keystone)" should be deleted and

"Keystone Shipping Co. (Keystone Shipping)" be substituted;

Page 4, paragraph 2, line 7, the words "or Keystone" should be inserted after the words QUEENY INTERESTS.

Page 10, Title to Section III, "KEYSTONE'S PETITION TO LIMIT ITS LIABILITY" should be deleted and

* Honorable Dickinson R. Debevoise, United States District Court for the District of New Jersey, sitting by designation.

"THE QUEENY INTERESTS' PETITIONS TO LIMIT THEIR LIABILITY"

be substituted.

PAGE 29, VII., the first full sentence of that paragraph which reads "For the reasons stated above, we will reverse the district court with respect to its denial of the petition of limitation of liability to Keystone" should be deleted and the following sentence substituted:

> For the reasons stated above, we will reverse the district court with respect to its denial of the petition of limitation of liability to Bankers Trust Company, Monsanto Company and Keystone Shipping Co.

By THE COURT:

A. LEON HIGGINBOTHAM
Circuit Judge

Dated: July 24, 1981

IN THE
UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

In the Matter of
The Complaint of Bankers Trust Company as Owner-Trustee and Monsanto Company as Chartered Owner, and Keystone Shipping Co., as Chartered Owner and Operator of the SS EDGAR M. QUEENY, for Exoneration from

C. A. No. 75-364

In the Matter of
The Complaint of VILLANEUVA COMPANIA NAVIERA, S.A., Owner of the tank vessel CORINTHOS, for Exoneration from and Limitation of Liability

C. A. No. 75-2110

MEMORANDUM OPINION AND ORDER

WEINER, J. FEBRUARY 19, 1980

These admiralty actions arise out of a collision which occurred during the early morning hours of January 31, 1975, on the Delaware River at Marcus Hook, Pennsylvania. The vessels involved were the SS Edgar M. Queeny ("Queeny"), an American steamship, and the S.T. Corinthos ("Corinthos"), a Liberian steam tanker. At the time of the collision, the Corinthos was moored, starboard side, to the BP Oil Inc/Sohio Petroleum Company dock at Marcus Hook, Pennsylvania in order to discharge her cargo of crude oil. The collision and the resulting explosions caused extensive damage to the dock,

the destruction of the Corinthos, oil pollution of the Delaware River, minor damage to the Queeny, damage to neighboring properties, and tragic loss of 26 lives and other personal injuries.

As a result of this incident, numerous proceedings were instituted. The personal injury and wrongful death actions were settled and dismissed, and therefore shall not be discussed in this opinion. A products liability action was filed by BP Oil Inc. and Sohio Petroleum Company against Bethlehem Steel Corporation, General Electric Company and The William Powell Company. (See C. A. 77-2362). These defendants, collectively referred to as the products or third party defendants, participated in one aspect or another in the design and construction of the Queeny, her turbine set and controls, and the astern guardian valve. At the time of trial, the products liability action was severed and stayed pending the resolution of the limitation actions.[1] Also severed at the time of trial was the action of BP Oil, Inc./Sohio Petroleum Company against Villanueva Compania Naviera, S.A., et al., owner of the Corinthos. (See C. A. No. 75-1285).

In the instant limitation actions, the issue of damages was bifurcated from the issue of liability, and the cases then proceeded to trial before the court sitting without a jury. On the second day of trial, James F. Young, Esquire, attorney for the Queeny interests admitted that his client no longer sought exoneration. (N.T. Pgs. 38-39, July 19, 1979). Accordingly, our opinion will address the questions of whether the Queeny interests are entitled to limit their liability and whether the Corinthos and BP Ohio Inc./Sohio Petroleum Company interests can be exonerated from or limit their liability. For ease

1. The products liability action was severed on the granting of a motion of the products liability/third party defendants.

of understanding, our Findings of Fact, Discussion, and Conclusions of Law shall be recited in narrative form rather than in separately numbered paragraphs.

II

The SS Edgar M. Queeny, Official Number 528567, is a single screw, steam powered tank vessel of 19,046 gross tons. She is 660.2 feet in length and 90 feet in breadth. She is powered by a 15,000 shaft horsepower steam turbine. She was designed and built as a multi-product chemical tanker by the Bethlehem Steel Corporation ("Bethlehem") during the mid-to-late 1960's for the Monsanto Chemical Co. The Queeny's turbine set and controls was designed and built by the General Electric Company ("G.E.") pursuant to a subcontract with Bethlehem. G.E. in turn, subcontracted with The William Powell Company ("Powell") for the manufacture of a valve known as a Marine Astern Guardian Valve, to be used in the turbine.

The Corinthos, Official Number 1916, was a single screw, steam powered tank vessel of Liberian registry of 30,705 gross tons. She was 723.7 feet in length and 106 feet in breadth. She was powered by a 17,000 horsepower steam turbine.

The Corinthos moored at the BP Oil, Inc. refinery dock in Marcus Hook, Pennsylvania at approximately 1500 hours (3:00 p.m., Eastern Standard Time) on January 30, 1975 and began discharging its cargo of crude oil. The Queeny moored across the river at the Monsanto Chemical Co. dock at Bridgeport, New Jersey at approximately 1248 hours (12:48 p.m., Eastern Standard Time) on January 30, 1975, in order to discharge part of its cargo.

At the time of docking, the Queeny was under the command of Captain Fay Kellog with Sverre Sorensen at

the conn [2] serving as the pilot. Both Captain Kellog and Pilot Sorensen were familiar with the Queeny having participated in her docking and undocking maneuvers many times. At approximately 2300 hours (11:00 p.m., Eastern Standard Time) the vessel began preparations to depart Bridgeport, New Jersey and proceed to Paulsboro, New Jersey. As part of these preparations, the Third Mate, Robert Downs, and an engineer tested the engine order telegraph at the bridge and engine room locations, the steering gear, the bow thruster, and synchronized the wheelhouse, chartroom and engine room clocks. The equipment which was tested was found in good operating condition.

Since the Queeny was moored port side to the pier, it was necessary for it to make a 180° starboard turn upon leaving the dock in order to proceed upstream to the next discharge facility at Paulsboro, New Jersey.

At approximately 0006 hours (12:06 a.m., Eastern Standard Time) on January 31, 1975, the Queeny departed the Monsanto terminal. Its draft at that time was 36 feet forward and 36 feet 10 inches aft. The weather was clear and cold with visibility of 8-10 miles. The tide was flooding with a current of about 1.5 to 2.0 knots and the eastern half of the Marcus Hook channel was closed for dredging operations. The dredging operations reduced the channel width from its normal 800 feet to 400 feet. The "Local Notice to Mariners" required vessels to proceed up the western half of the channel.

During the undocking maneuver, the master and pilot were on the bridge; the third mate, Robert Downs, was manning the engine order telegraph; and the quartermaster, Daryl Sutton was at the helm. In the engine room at this time were the first assistant engineer, George Zahar, at the engine control with third assistant engineer, J. King;

2. Conn is a nautical term meaning control of the ship.

and engineman, J. Tomczak. At the forecastle docking station were Michael Casey, first mate; and Arvie Harris, able seaman; along with several other crew members. At the after docking station was chief mate, Lee Woodward, with various other members of the ship's crew assisting to undock the vessel.

In manuevering from the dock, the Queeny used its main engine and bow thruster, and had its rudder hard left. The Tug Tanda 12, which was engaged to assist with the undocking, was positioned on the port bow and was in radio communication with Pilot Sverre Sorensen who was at the conn. Both anchors on the Queeny were ready to let go, to the degree that it was necessary only to remove the riding pawl and disengage the braking mechanism.

At the time of letting go the lines, prior to departing, Pilot Sorensen made a safety call on Channel 13 of the VHF stating that the Queeny was preparing to leave the dock at Monsanto. Once the vessel was clear of the dock and was proceeding into the river, a second safety call was made. Also at that time the Queeny began backing and filling, using a series of astern and ahead maneuvers in conjunction with the ship's rudder, the bow thruster, and the tug boat to facilitate the starboard turn of the vessel to position her to head upriver. As she was heading into the channel both Pilot Sorensen and Captain Kellog were aware that the eastern half of the channel was closed.

At about 0010 hours (12:10 a.m., Eastern Standard Time), Tug Tanda 12 was pushing the port bow of the Queeny to assist the ship in the turning maneuver. At about that time, Pilot Sorensen came into radio contact with Captain William Kegel, Master of the upbound S.S. Pennsylvania Sun in order to discuss the Queeny's intentions. During this time, the bow thruster was on

right thrust and the Queeny's engines were placed on half ahead with rudder hard right. In the period of time between 0010 and 0022 hours, the Queeny backed and filled approximately twice in order to facilitate its turn.

Located in the river approximately 1060 feet from the Monstanto dock and 1,440 feet from the channel edge is anchor buoy D. At about 0022 hours, the Queeny approached buoy D, said buoy being located about 30-35 yards from the port bow, bearing well to the left of the bow. Also at that time, the Tug Tanda 12 was released from the port bow and was instructed to stand by at Paulsboro, New Jersey. Captain Kellog was on the starboard wing of the bridge and Pilot Sorensen was on the port wing.

Though the rate of swing materially decreased upon the release of the tug, Captain Kellog felt no cause for concern because he expected Pilot Sorenson to back and fill additionally as he had done on other occasions in that same turn across the river or in similar maneuvers. However, as the rate of swing decreased, the Queeny's forward acceleration increased.

At this point, Captain Kellog became apprehensive that the Queeny would not clear the Corinthos because of Pilot Sorensen's failure to continue to back and fill, and because of the decrease in the rate of turn. Though Captain Kellog voiced his concern about the "closeness" of the situation, Pilot Sorensen replied, "Captain, she should make that O. K", or words to that effect.

Shortly thereafter; Captain Kellog again voiced his concern to Pilot Sorensen, stating: "Captain, I think we better go astern because we will be very close on this maneuver", or words to that effect. Captain Kellog received no response to his statement. He noted that Pilot Sorensen as engaged in a radio exchange with Captain Kegel of the S.S. Pennsylvania Sun.

Captain Kellog became concerned with the proximity of the Queeny to the well lighted Corinthos, and he ordered full astern. That order was rung up on the engine telegraph by Third Mate Downs. The full astern order was promptly acknowledged by the First Assistant Engineer. George Zahar, who then executed the order.

Shortly thereafter, Pilot Sorensen ordered a "double jingle" which order was received and promptly acknowledged by the engine room. The order had little impact on the operation of the engines in that Mr. Zahar had already opened the throttle as far as he thought could be safely done. The rate of the Queeny's turn to the right was reduced as the propeller responded to the full astern order.

As the bow of the Queeny continued to ease closer to the Corinthos, Pilot Sorensen recommended that the starboard anchor of the Queeny be dropped. Captain Kellog apparently acquiesced in that he gave that order via his walkie talkie. No response was received because Arvie Harris, the Bow Lookout and the only person stationed at the windlass anchor watch position, had fled the extreme bow, seconds before, in the face of an impending collision.

Moments later, the Queeny came into contact with the Corinthos. The first contact produced sparks as a result of scraping between the two vessels. Due to the shock of the initial contact and the ships' rolling and pitching, there was an interval of intermittent non-contact and contact. It was during the subsequent contacts that the port fluke anchor of the Queeny punctured the port shell plating of the No. 4 and/or No. 5 cargo tanks of the Corinthos. During this time period, there was a series of explosions, followed by a conflagaration.

Immediately after the collision and first explosion, third mate Downs instinctively rung up "Stop" on the

engine telegraph. Shortly thereafter, Captain Kellog noted that the tachometer indicated 0 RPM's and called to Mr. Downs for full astern. That order was executed but not without a degree of confusion.

Captain Kellog, in an effort to emphasize the order, took the bridge telegraph control handle and signalled what he believed to be "Full Astern." Inadvertently, the telegraph was moved to "Bridge Control" following which the First Assistant Engineer called the bridge by telephone to confirm the request. Failing to receive a response from the bridge, the engineer moved the throttle control selector to the "Bridge Control" position. After some confusion, the bridge selector switch was moved from "Bridge Control" to "Full Astern", which signal was received and responded to by the engine room. The Queeny's propeller then began to turn in reverse.

Efforts to back the Queeny away continued until 0041 hours, at which time the Queeny pulled clear, and was able to proceed "full ahead" away from the burning Corinthos. While the Queeny headed downriver toward an anchorage area, its crew was engaged in extinguishing a fire on the Queeny's forecastle head.

At approximately 0100 hours (1:00 a.m., Eastern Standard Time), the Queeny anchored at a position close aboard buoy C of the Sun Oil dock. At about 0305 hours, she began to heave anchor and shifted to another anchorage which was completed at about 0345 hours when the Queeny safely anchored.

Meanwhile, the fires aboard the Corinthos continued to burn out of control through the early morning hours of January 31, 1975. During the course of the firefighting activities, the Delaware River was intermittently opened and closed to traffic as the danger of additional fires fluctuated.

Eventually, the fires and explosions on board the Corinthos caused that ship to break in half and to immediately sink near by the BP dock.

III

Limitation and/or exoneration of a vessel owner's liability is provided for in Title 46 of the United States Code, Section 181 *et. seq.* The section pertinent to the issues in this case in Section 183(a), which in relevant part, provides:

> "The liability of the owner of any vessel . . . for any . . . loss, or destruction by any person of any property, goods, or merchandise shipped or put on board of such vessel, or for any loss, damage or injury by collision, or for any act, matter, or thing, loss, damage, forfeiture, done or occasioned, or incurred without the privity or knowledge of such owner or owners shall not, . . . , exceed the amount or value of the interest of such owner in such vessel, and her freight then pending."

The analysis of whether the Queeny interests are entitled to limit their liability involves a two-step process. First, we must determine what acts of negligence or conditions of unseaworthiness caused the accident. Second, we must determine whether the shipowner had knowledge or privity of those same acts of negligence or conditions of unseaworthiness. *Farrell Lines, Inc. v. Jones,* 530 F. 2d 7, rehearing denied, *African Neptune, S. S.,* 532 F. 2d 1375 and *Farrell Lines, Inc. v. Jones,* 532 F. 2d 1935 (5th Cir. 1976). Negligent actions or unseaworthy conditions of which the vessel owner has knowledge or privity will trigger the denial of limitation. *Wyandotte Transporta-*

tion Co. v. United States, 88 S. Ct. 379, 389 U. S. 191, 19 L. Ed. 2nd 407 (1967). Moreover, it is settled that the claimants bear the initial burden of proving negligence or unseaworthiness while the Queeny interests bear the burden of proving lack of privity or knowledge. *Farrell Lines, Inc. v. Jones, supra.*

The parties do not dispute that the predominating cause of this disaster was Pilot Sorensen's failure to properly execute the starboard turn into the Marcus Hook channel due to his navigational error. In addition, it is clear that navigational error on the part of the crew generally occurs without the privity or knowledge of the shipowner, and is not attributable to an absent owner for purposes of limitation of liability. *Tittle v. Aldacosta,* 544 F. 2d 752, rehearing denied, 546 F. 2d 906, 907, rehearing denied 582 F. 2d 12 (5th Cir. 1977).

IV

The claimants in this case however, have argued and presented voluminous testimony and exhibits to the effect that other acts and/or conditions of which the Queeny interests had knowledge or were privy to contributed to the accident.

BP Oil, Inc. and Sohio Petroleum Co. contend that contributing causes of the collision were:

(1) The failure of shoreside management to use due diligence to discover and remedy the damage to the astern turbine which reduced the Queeny's astern power by 40% and rendered her unseaworthy;

(2) The commitment by management of discretion to the master to disregard company instructions requiring an anchor watch while maneuvering in congested waters which precluded the dropping of the anchors, which could have prevented the collision; and

(3) The continued pressure of Monsanto on Keystone to cut costs, which resulted in the failure to use the bridge control and premature relief of the bow detail without posting an anchor detail.

The Corinthos interests raise the same three points and allege as other contributing causes of the collision:

(1) The failure of shoreside management to instruct the master and officers of the Queeny to use tugs throughout any starboard turning maneuver in confined or restricted waters because of the Queeny's inability to properly turn starboard;

(2) The failure of shoreside management to instruct the master and officers of the Queeny that the bow thruster power had been increased by the shipbuilder from 1200 to 1600 amps; and

(3) The failure of shoreside management to inquire into

(a) The reason the master refused to perform a crash stop test, and into

(b) The master's apprehension that such a test would damage the vessel's propulsion system.

V

After review of the evidence we conclude that the Queeny interests are not entitled to limit their liability. Factors other than navigational error, to which they were privy or had knowledge, contributed to the collision.

The issue which dominated much of the claimants case was the alleged defective condition of the astern turbine and the astern guardian valve. They introduced evidence which established that the valve and turbine were in a damaged condition and were contributing causes

of the collision. The claimants contended that if the astern turbine performed properly on the night of the collision, the Queeny would have been able to stop prior to contacting the moored Corinthos.

The turbine set for the Queeny was supplied to Bethlehem Steel Corp. by General Electric, who in turn had selected the William Powell Company to supply the astern guardian valve.

The astern guardian valve is physically located on the main steam line just outside the steam inlet to the astern element of the low pressure turbine. It is the last valve the steam passes through before entering the astern turbine. Its purpose is to guard the astern turbine from an accidental opening of the astern throttle valve while the turbine is turning forward RPM's.

When the astern guardian valve is opened, steam will pass into the astern turbine and reverse the engine. If steam was accidently released into the astern turbine while it was at full speed ahead, the turbine would be severely damaged.

The basic valve is a disc, 5" in diameter and 6" high, which is attached to the end of a stem. The disc moves up and down inside the valve body as the stem is raised or lowered by operation of a motor. The stem also can be operated by a hand wheel. The bearing surfaces of the disc, which touch the valve body are referred to as the guide surfaces.

The clearances between the guide surfaces and the valve body, at normal room temperature, is 10-12/1,000ths of an inch, as designed.

The disc and valve body were both manufactured of the same material, which was grade ASTM-217 (grade WC6) cast steel. Neither the disc nor the body was specifically treated to obtain differing degrees of hardness.

The operation of the valve is as follows. Steam enters the valve through an inlet in its side and exits through

a hole in the bottom of the valve. When the valve is open the disc is lifted to partially clear the inlet at the side and open the hole in the bottom. When closed, the valve seats on the bottom of the body, closing the exit hole. On the inside of the valve body, the inlet opening presents a sharp edge past which the guide surfaces must travel on opening or closing. As the disc travels up and down, it is held in position by the guide surfaces which contact the body of the valve. The stem does not provide guidance to protect against contact between the valve disc and valve body, but merely moves the disc up and down.

VI

The defect in the astern guardian valve was the galling or gouging of its surface, caused by the rubbing of the two metal castings manufactured from the identical grade steel. As the surfaces rubbed together, the effect was a welding together of the surfaces followed by the chiseling free of pieces of metal. The continued operation of the system, caused larger pieces of metal to break free which metal pieces were then projected into the astern turbine by the passing steam. The metal pieces damaged the turbine's blades. The damage to the astern turbine's blades reduced the Queeny's astern power.

The significance of the reduced astern power is manifest. When Captain Kellog ordered full astern in face of the impending collision, the Queeny's engines did not properly respond to the command. The turbines of the Queeny were designed for normal sea use and had been guaranteed to run at astern RPM equal to 70% of 109,[3] which is 76.3 RPM. In an undamaged condition, the Queeny's astern turbine would have responded to the full astern command by producing 76.3 RPM. On the Queeny's sea trial run, it achieved astern power of 76

3. 109 R.P.M. is the full ahead rating of the turbines.

RPM. However, on the night of the collision, the astern turbine did not produce the guaranteed level of astern RPM's. It is clear that the condition of the Queeny's astern turbine rendered her unseaworthy.

Moreover, the expert of the Corinthos interests established that if the Queeny's astern turbine functioned properly, the Queeny would not have collided with the Corinthos.

To that effect, the Corinthos interests' finding of fact # 87 is accepted and adopted by this Court. It reads as follows:

> "87. Dr. Corlett reconstructed the events of the night of the collision to confirm that the Queeny: (a) If navigating with a damaged astern turbine and the slow rate of change of recorded RPM on the night of the collision from half ahead to full astern (with all other conditions being the same as on the night of the collision), she would have collided with the Corinthos. His findings precisely followed the facts of the collision which actually took place that night. (C-343, Line 1) [Dr. Corlett's Matrix on the Court Room Easel]. (b) If all other conditions were the same as on the night of the collision, but with the astern turbine undamaged and 76 RPM's astern recorded at the rate of change recorded on the official Sea Trial Tape, there would have been no collision. (C-343, Line 2). See also, (Line 4 of C-343) where it is again demonstrated that undamaged turbine permits the vessel to avoid collision where the vessel achieved 76 RPM astern at the rate of change recorded at sea trials: (c) Again, assuming that all other conditions were the same as on the night of the collision, but with the astern turbine as damaged and that only 70 RPM's

astern were recorded showing a rate of change recorded on the RPM tape as shown on the night of the collision, there would have been a collision. (C-343-Line 3). Thus, on the night of the collision, even if the engineer's achieved 70 RPM as claimed by Zahar (who was relying on the Bridge Logger Tape), there would have been a collision in any event. The Bridge Logger Tape is the only tape which can conceivably be read as 70 RPM astern on the night of the collision. (d) If the vessel had achieved 76 RPM's astern on the night of the collision with an undamaged turbine and the RPM's were recorded on the night of the collision, there would have been no collision. (C-343, Line 5). (e) Finally, Dr. Corlett proved that if only 65 RPM's astern were achieved with a damaged turbine, and the rate of change were identical to that recorded rate at the time of sea trials, there would have been no collision. (C-343; Corlett N/T 1397-1405; C-87).

Thus, whenever the vessel was functioning with damaged turbines, a collision resulted except for line 6 on C-343. The hypothetical situation outlined there by Dr. Corlett (i.e. application of the rate of change of RPM's as rapidly as on the sea trials), could not have happened on the Queeny on the night of collision because the engineers would not apply the sea trials rate of change. Each one testified and confirmed that such a rate of change would have risked loss of power through a boiler surge. (Breton Dep. 80-82, Q-78; Ross Dep. Sept. 21, 1978, 19-20, 22, 49, 53, 48-49, 73-74, 131; C-355; Zahar N/T 381, 387)."

VII

In order for this finding to be fully comprehended, it is necessary to describe the method by which commands

are given to the Queeny's engines, and the meaning of "rate of change".

Commands to the Queeny's engines and control of her main throttle can be effectuated by three different methods. (1) Directly, termed "Bridge Control", whereby a throttle in the wheelhouse is operated which automatically controls the direction and speed of the engines; (2) Automatically by the engineer on watch using the engine room console, termed "Central Control"; or (3) Manually by the engineer on watch by operating the throttle control valve by hand, termed "Manual Control". When the ship is operating on either "Central Control" or "Manual Control" the engineer on watch receives his commands via the engine order telegraph.

When the ship is operating on "Bridge Control", the bridge has direct control of the ship's maneuvering speed and direction, and the response time of the engine is greatly reduced. Operation on either "Central Control" or "Manual Control" necessarily increases the engine response time because additional steps are taken before the throttle is adjusted in compliance with an order from the bridge.

Rate of change as used in the above paragraphs refers to the elapsed time from the time the full astern order was given by Captain Kellog until the time the throttles were actually placed on full astern. Operation on Bridge Control permits the Captain or Pilot to place the throttles in any position desired within a matter of seconds. On its sea trials, the Queeny was operated on Bridge Control, and the throttle response was approximately 5 seconds. Dr. Corlett's findings establish that if the sea trial rate of change (i.e. virtual instantaneous throttle response) applied), the Queeny would not have collided with the Corinthos, provided the engine achieved a minimum of 65 astern RPM's.

On the night of the collision, the Queeny was operating on Central Control. Central Control requires a desired command to be transmitted via the engine telegraph in the wheelhouse to the engine telegraph indicator in the engine room, an acknowledgment by the engineer, and then execution of the order by the operation of the control wheel which will automatically activate the throttles. On the night of the collision, operating on Central Control, 1 minute and 45 seconds elapsed from the time the order for full astern was given until the throttle was placed on full astern. In comparison to the amount of time which would have elapsed if the vessel was operating on Bridge Control, Dr. Corlett termed the rate of change on the night of the collision, slow. His findings establish that given the slow rate of change, the Queeny could have avoided the collision only if the vessel produced 76 astern RPM's. Though we do not find the failure to use "Bridge Control" to be a contributing cause of the collision, it is clear that the inability of the vessel to produce 76 astern RPM's was a contributing cause of the collision.

VIII

Because we have determined that the astern guardian valve and the astern turbine were defective at the time of the collision, and were contributing causes of the collision, we shall not make a finding regarding the claimants other alleged causes of the collision. Instead, we shall proceed to determine whether the Queeny management interests were privy to or had knowledge of the defective condition of the astern turbine and the astern guardian valve. We have concluded that the requisite knowledge existed.

The parties do not dispute that in the case of a corporate owned vessel, the privity or knowledge issue turns

on whether shore-based high leveled management was aware or should have been of the likelihood of the occurrence happening after the ship was under way. *Tittle v. Aldacosta,* 544 F. 2d 752, rehearing denied, 546 F. 2d 906, rehearing denied, 582 F. 2d 12 (5th Cir. 1977). Thus, we must determine what knowledge, if any, the owners of the Queeny had regarding the defective astern turbine and astern guardian valve at the time of the collision.

Difficulty with the operation of the astern guardian valve first surfaced in September, 1970, shortly after the Queeny was delivered to her owner. On her maiden voyage from Baltimore to Texas, the astern guardian valve malfunctioned by either sticking or jamming in the closed position. While in the closed position, steam is prevented from passing through to the astern turbine.

Normally, the valve is operated automatically by the limitorque motor. This motor provides torque to open or close the valve. The limitorque component of the valve limits the torque which can be applied by the motor. On the maiden voyage, the motor was incapable of moving the valve. Each time operation was attempted, the electrical circuit overloaded and the circuit breaker was tripped.

The astern guardian valve is equipped with a hand wheel which can be used to manually operate the valve. On the maiden voyage, the Queeny's Chief Engineer Breton attempted to turn the hand wheel, but was unable to do so. Eventually, Breton, with the assistance of Bethlehem Steel Guarantee Engineer Jensen, who also was aboard, was able to free the hand wheel by using a wrench which provided additional leverage. The wrench is referred to as a "cheater".

The use of the "cheater" enabled the engineers to apply excessive force to the hand wheel in order to break free the valve. The valve was jammed because the disc

and the valve body, both of which were manufactured from the identical grade steel, had welded together. The application of the excessive force not only broke the weld, but also chiseled free pieces of metal from the disc and the valve body, which metal pieces were projected into the astern turbine by the passing steam. The metal pieces damaged the astern turbine blades.

The instruction manual for the astern guardian valve specifically states that a "cheater" should never been used on the handwheel. The manual also states, in a section entitled "Trouble-Shooting: Excessive handwheel effort can indicate the following: (a) improperly lubricated or damaged valve stem; (b) valve packing gland too tight; (c) improperly lubricated valve; (d) stem nut too tight on valve stem; (e) faulty or damaged valve parts".

Rather than investigate the cause of the jamming of the valve, Breton and Jensen reset the limitorque circuitry to allow the valve to open and close.

Keystone management was aware of the difficulties with the astern guardian valve as of September 14, 1970. On that date, Samuel Spencer, Technical Assistant to the Vice President of Keystone, routed an internal memorandum to Adolph B. Kurz, President of Keystone, informing Kurz of the outstanding problem with the astern guardian valve. Spencer also notified Bethlehem Steel, specifically, E. L. Insley, the Chief Guarantee Engineer, regarding the difficulties with the astern guardian valve.

As a result of Keystone's complaints about the valve, and Jensen's reports to Bethlehem, the valve was listed by Bethlehem as an item for repair at the guarantee yard dry docking after six months of operation. Three separate items involving the valve were ultimately included in the "Status of Guarantee Items" list dated March 23, 1971. They were: (a) B-34 Astern Guardian Valve won't close; (b) B-57 Astern Guardian Valve; and (c) B-154 Astern Guardian Valve bracket.

As part of Bethlehem's guarantee service program, it was arranged for Guarantee Engineer Robert McKendrick to meet the Queeny at New Haven, her first northern port, on September 20, 1970. However, McKendrick did not examine the valve nor did he take steps to determine the cause, scope or nature of the problem. When he met the Queeny, he was informed that the problem was rectified.

Consequently, McKendrick submitted his trip report with the notation that the valve problem was solved and Bethlehem marked items B-34 and B-57 as completed. Thus, when the Queeny entered the shipyard for guarantee period repairs in March, 1971, the astern guardian valve was not opened and no inspection was made. The cause of the jamming and sticking of the valve was not investigated.

The Queeny interests' failure to insist upon an inspection of the astern turbine and astern guardian valve during the guarantee period repairs is not excusable on the ground that they were informed that after adjustment of the limitorque circuitry, the valve functioned properly. The clear warning contained in the instruction manual for the astern guardian valve "Trouble-Shooting" section placed the Queeny interests on notice of the possibility of damage to the valve. In view of this clear warning, it was incumbent upon the Queeny management to insist upon an adequate inspection during the guarantee period repairs.

Moreover, during the period of operation between the date of the sea trials and the date of the collision with the Corinthos, it was apparent that the astern turbine was not producing RPM levels in accordance with the specific commands given, and that the engine response time for orders for 60 RPM or greater, increased. These facts were readily ascertainable because the

Queeny is equipped with a data logger system which records on a continuous graph every engine command and the shaft response.

However, Queeny management failed to review the graph tapes. Proper monitoring of the turbine's performance by review of the graph tapes would have revealed the deficiency in the turbine's performance. Queeny management, having notice of the difficulties with the astern guardian valve, should have monitored the performance of the astern turbine to determine if it was affected by the prior difficulties with the astern guardian valve.

Moreover, difficulty with the turbines of the SS Spirit of Liberty, a sistership of the Queeny operated by Keystone, should have placed the defendants on notice that there was a possibility of damage to the Queeny's turbine and astern guardian valve. Both the Queeny and the Spirit of Liberty contained astern guardian valves manufactured by the William Powell Company according to the same specifications, using non-hardened metals.

Extensive damage to the Spirit of Liberty's astern turbine was discovered in December, 1973, when the turbine was opened and inspected during her quadrennial survey. It is noteworthy that the damage suffered by the astern turbine of the Spirit of Liberty was very similar to the damage subsequently discovered on the Queeny.

The cause of the damage to the astern turbine of the Spirit of Liberty was not ascertained. The origin of the metal particles that damaged the turbine was not isolated. If proper procedure was followed for determining the cause of the damage, the failure of the astern guardian valve would have been discovered. Since Keystone receives reports from Bethlehem regarding repairs to its ships, they would have been alerted to the possibility

of damage to the astern guardian valve on the Queeny when damage to the astern turbine of the Spirit of Liberty was reported.

Additional evidence combines with what has been recited to establish that Keystone negligently failed to monitor the performance of the Queeny's astern turbine.

In February, 1972, Keystone instructed all its Captains to perform turning circle tests and crash stop tests (emergency full astern). Though Captain Kellog performed turning circle tests, he refused to perform a crash stop test. He was apprehensive that such a test might damage the intricate and delicate propulsion system. By letter dated March 12, 1972, he expressed his fears to Keystone's Vice-President in charge of Operation, Chester Williams.

This letter clearly put Keystone on notice that the Queeny might be incapable of performing an important safety maneuver. Keystone, however, took no measures to determine the nature of Captain Kellog's fears.

If Keystone had been reviewing the graph tapes they would have discovered the problems associated with the functioning of the astern turbine. With such information in hand, the reason for Captain Kellog's refusal to perform the crash stop test would have been manifest.

The evidence referred to in this section of our opinion clearly indicates that the Queeny's shoreside management was aware, or was negligent in not being aware, of the vessel's unseaworthiness. The unseaworthy conditions referred to were contributing causes of the collision.

Based upon the legal precedent set forth in Section III of our opinion, we conclude that the Queeny interests are not entitled to limit their liability.

IX

Our conclusion regarding the Queeny interests' petition does not complete our inquiry. Also before us is the petition of the Corinthos interests for exoneration from and limitation of liability. The issue presented derives from the Queeny interests' contentions that the Corinthos was at fault for not inerting her tanks and that BP/Sohio were negligent in failing to have a shore-based inert gas system to be used during discharge of crude cargo.

After careful review of the Queeny interests' contentions, and review of the trial testimony, exhibits and all other supporting evidence, we have concluded that the absence of inerting systems was a contributing cause of the damages. For the following reasons, however, we shall not deny the petition of the Corinthos-BP/Sohio interests for exoneration from liability.

In an uninerted tanker, two of the three elements necessary for combustion are present; fuel, in the form of vapor from the cargo, and oxygen, drawn into the tanks during the discharging operations. The third element necessary for combustion is an ignition source.

An inert flue gas system removes oxygen from the tanks of crude carriers, rendering combustion dependent upon the simultaneous injection of two outside elements; oxygen plus an ignition source.

The system utilizes flue gas, manufactured as a by-product from combustion taking place in the vessel's own boilers. After the gas is cleaned it is pumped into the cargo tanks to displace the vapor and oxygen in the tanks, replacing it with an inert gas.

The Corinthos was not fitted with an inert gas system at the time of her construction, in 1963, nor had she been retrofitted prior to the collision.

The concept of inerting is not new. As early as 1925, Chevron inerted some of its ships. Chevron's lead was followed by Sun Oil, who in 1932, began inerting as a result of an explosion in one of its vessels. Sun Oil inerted ships as small as 16,000 tons. BP Ltd., the parent company of BP/Sohio, has been inerting ships since 1963. Her owners and operators were aware that she was not inerted. However, as early as 1972, the owners and operators had vessels constructed with inert gas systems, and in 1975, about the time of the collision, they retrofitted a vessel with an inert gas system.

The thrust of the Corinthos interests' argument is that at the time the Corinthos was built (1963) and as late as the time of the collision (1975), there was no requirement, either national or international, that a vessel the size of Corinthos be fitted with an inert gas system. In addition they contend that the explosions which followed the collision would not have been prevented by an inert gas system because the Corinthos' tanks were breached upon the collision, which would have allowed the escape of any inert gas, and the introduction of oxygen.

BP/Sohio contend that the Queeny interests' argument places them in the untenable position of either providing a shore based inert gas system for uninerted tankers, or refusing to allow such tankers to discharge their cargo. They claim that the technology for the shoreside inerting of tankers is not available, and since only a very small percentage of the world's tankers were inerted at the time of the collision, if the Court accepts the Queeny interests' position, BP/Sohio would be forced to cease operations because they would be unable to receive crude for refining.

With regard to the position of the Corinthos interests, we shall grant the petition for exoneration. We reach this decision reluctantly, and despite our strong pre-

dilection to deny the petition. In the absence of recently enacted legislation which sets forth the time frame for the retrofitting of varying size crude carriers with an inert gas system, we would hold that the Corinthos was unseaworthy at the time of the collision. *See,* The Port and Tanker Safety Act of 1978, Pub. L. No. 95-474, 92 Stat. 1471 (codified at 33 U. S. C. §§ 1221-1232; 46 U. S. C. §§ 214, 3912(a)).

Though in 1975, no law required the inerting of cargo tanks on vessels the size of the Corinthos, we believe that at that time, the custom of the industry was insufficient to satisfy common law standards of care. However, the Corinthos interests are fortunate that Congress has entered this field of law, thereby "preempting" the Courts from deciding this issue.

Under the time sequence contemplated by Congress, vessels the size and age of the Corinthos need not be retrofitted with an inert gas system until May 31, 1983. Congress determined to grant a grace period because of possible ramifications if it acted unilaterally in an area effecting international commerce. Congress chose instead to defer to the schedule and requirements established by the International Maritime Consultative Organization (IMCO).[4]

Though we must defer to the wisdom of Congress, which reached its conclusions only after extensive deliberation on the matter, we feel we would be remiss if we did not express the following thoughts.

The importance of an inert gas system must not be minimized. The instant collision resulted in the loss of 26

4. Congress modified the IMCO Protoculs in certain respects, inter alia, by requiring the retrofitting of inert gas systems on older crude carriers of over 20,000 Dead Weight Tons (DWT) versus 40,000 DWT, and by phasing in the requirement on older carriers effective May 31, 1983.

lives and numerous other personal injuries. If such tragedies can be prevented by the utilization of an inert gas system, we strongly urge vessel owners and operators to take every feasible step to comply with the adopted legislation prior to the effective date.

We believe the shipping industry has anchored itself to a position which does not meet common law standard of care requirements. Justification based upon cost, feasibility, and effectiveness are not acceptable.

Moreover, we have reservations whether efficacy serves as an explanation. The expert testimony elicited at trial by both the Queeny and Corinthos interests established beyond question that the risk of explosion or fire is greatly reduced or completely removed when an inert gas system is utilized.

The experts stated that an uninerted tanker which has discharged its cargo of crude has been likened to a floating time bomb. They explained that the enormous build-up of the fuel vapor coupled with the introduction of oxygen results in a circumstance ripe for explosion upon the introduction of an ignition source. By inerting the tanks of crude cargo ships, the highly flammable condition does not develop.

Expert testimony established that even upon the breaching of the cargo tanks, an explosion would not occur. Since a combustible mixture of oxygen and fuel vapor must be present for an explosion to occur upon the introduction of an ignition source, the atmosphere in an inerted tank will not be susceptible to explosion until after the inert gas is replaced by oxygen. In view of the size of the puncture in the Corinthos tanks, and the fact that additional inert gas may be pumped into the tanks as needed to maintain a non-combustible mixture, oxygen would not have been introduced at such a rapid rate as to instanteously create a dangerous vapor mixture.

We take judicial notice of the fact that few cases have brought this issue to fruition because of the industry's policy of avoiding said issue in those few cases which are not settled.

One case in this circuit, however, did address the issue. In the case of the *Petition of Oskar Tiedemann and Co. (Elna II/Mission San Francisco)*, 179 F. Supp. 227 (D. Del. 1959), *Aff'd*, 289 F.2d 237 (3d Cir. 1961), the court determined that the Mission San Francisco was unseaworthy. Its owners were denied both exoneration from and limitation of liability because the vessel was not equipped with a method to relieve the highly combustible atmosphere in the tanks caused by the discharge of jet fuel. That court discussed both butterworthing and the use of a flue gas system as acceptable methods for relieving the highly combustible condition created in tanks after discharge of crude.

Clearly, if Congress had not preempted this field the law of this circuit would require us to deny the petition of the Corinthos interests for exoneration from or limitation of liability.

Next, we must determine whether BP/Sohio were negligent in failing to have a shore-based inert gas system to be used during discharge or in allowing an uninerted vessel to dock at its pier.

Above, we discussed the mechanics of a flue gas system. The system prevents oxygen from mixing with fuel vapor in cargo tanks. It requires the manufacture of an inert gas which gas then is introduced into the cargo tanks. The inert gas can be manufactured either as a by-product of the fuel burned by the vessel or at a shore-based discharge facility.

Though the available technology for the construction and development of a shipboard system exceeds that for a shore-based facility, many of the principles are the same.

With a shore-based system, the inert gas must be pumped to the vessel via a hose connection and then directed to the cargo tanks in much the same manner, through the same piping system, as if the inerting was done by a ship-board system.

Not only do BP/Sohio dispute the feasibility of a shore-based system but also they contend that utilization of a shore-based system would be ineffective once a vessel was underway, because cargo tanks breathe, which would allow the inert gas to leak out.

Though we agree that a ship based system has many advantages, we believe that due to the highly dangerous nature of this activity, every reasonable safety precaution must be taken to minimize the possibility of explosion.

In the absence of recently enacted legislation, we would not hear BP/Sohio to complain that it would be overly burdensome to require them to provide a shore-based inerting system for non-inerted ships or to turn away non-inerted ships. We are not familiar with any rule of law which would allow a party to successfully defend itself against a claim of negligence or contributory negligence, on the ground that in an effort to save time and money and to avoid a burdensome task it did not undertake the reasonable precautions dictated by the nature of the activity.

Moreover, the fact that a shore-based system may be ineffective once a vessel is underway is irrelevant to the duty of care imposed upon the owners of a crude oil discharge facility. BP/Sohio need not concern themselves with what might happen once a vessel is underway.

However, because Congress has expressed a sensitivity to the practical issues involved in revamping the shipping industry's practice of not inerting crude carriers, we shall be equally accommodative, and not hold BP/Sohio partially responsible for this disaster.

IN THE
UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

In the Matter of
The Complaint of Bankers Trust Company as Owner-Trustee and Monsanto Company as Chartered Owner, and Keystone Shipping Co., as Chartered Owner and Operator of the SS EDGAR M. QUEENY, for Exoneration from and Limitation of Liability

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C.A. No. 75-364

In the Matter of
The Complaint of VILLANEUVA COMPANIA NAVIERA, S.A., Owner of the tank vessel CORINTHOS, for Exoneration from and Limitation of Liability

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C.A. No. 75-2110

ORDER

The complaint and petition of Bankers Trust Company as Owner-Trustee and Monsanto Company as Chartered Owner, and Keystone Shipping Co., as Chartered Owner and Operator of the SS EDGAR M. QUEENY, for Exoneration from and Limitation of Liability is DENIED.

The complaint and petition of Villaneuva Compania Naviera, S.A., Owner of the tank vessel CORINTHOS, for exoneration from and limitation of liability is GRANTED.

The Court sets Friday, February 29, 1980 at 1:30 p.m. for the presenting of evidence on the issue of assessment of damages.

IT IS SO ORDERED.

/s/ CHARLES R. WEINER
Charles R. Weiner

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

October 6, 1981

Nos. 80-1405, 80-1450, 80-1494/7

In the Matter of:
The Complaint of Bankers Trust Co., et al.
Bankers Trust Co., et al.
Appellants in No. 80-1405
BP Oil Inc., et al.,
Appellants in No. 80-1450
Villaneuva Compania Naviera, etc.,
Appellant in No. 80-1496

In the Matter of:
Complaint of Villaneuva Compania, et al.
Bankers Trust Co., et al.,
Appellants in No. 80-1494
BP Oil Inc., et al.,
Appellants in No. 80-1495
Villaneuva Compania Naviera, et al.,
Appellant in No. 80-1497

TO: HIGGINBOTHAM, *Circuit Judge*

1. Motion of Bankers Trust Company, et al. for a Continuance of Stay of Mandate pending application for a writ of certiorari and determination by this Court of the damage issues raised in the subject litigation.
2. For your information this Court's mandate has previously been stayed to October 6, 1981.

in the above-entitled case. We have been advised by counsel for BP Oil and Sohio Petroleum Company and by

counsel for Villaneuva Compania that they intend to file opposition to the Motion to Stay, etc. Upon receipt of such opposition it will be forwarded to you.

Respectfully,

/s/ SALLY MRVOS/bjr
Clerk

enc.
bjr

The foregoing Motion is granted and the mandate is hereby stayed until December 5, 1981.

By the Court,

A. LEON HIGGINBOTHAM
Circuit Judge

Dated: November 3, 1981

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 80-1405, 80-1450, 80-1496

In the Matter of:

The Complaint of Bankers Trust Company, et al. and Villaneuva Compania Naviera, S.A., et al. v. Bethlehem Steel Corporation, et al.

Bankers Trust Company, et al.,
Appellants at No. 80-1405

BP Oil Inc., et al.,
Appellants at No. 80-1450

Villaneuva Compania Naviera, SA.,
Appellant at No. 80-1496

(D.C. Civil No. 75-0364)

Nos. 80-1494, 80-1495, 80-1497

In the Matter of:

Complaint of Villaneuva Compania Naviera, S.A., etc., et al., National Grange Mutual Insurance Company v. Bethlehem Steel Corporation, et al. v. British Petroleum, Ltd., et al.

Bankers Trust Company, et al.,
Appellants at No. 80-1494

BP Oil Inc., et al.,
Appellants at No. 80-1495

Villaneuva Compania Naviera, S.A.,
Appellant at No. 80-1497

(D. C. Civil No. 75-2110)

ORDER

Present: WEIS and HIGGINBOTHAM, *Circuit Judges*, and DEBEVOISE, *District Judge* *.

Upon consideration of the Motion for Clarification of BP Oil, Inc. and Sohio Petroleum Company (Appellants in Nos. 80-1450 and 80-1495), filed October 9, 1981, it is hereby ORDERED that the motion is DENIED.

BY THE COURT:

A. LEON HIGGINBOTHAM
Circuit Judge

Dated: November 10, 1981

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* Honorable Dickinson R. Debevoise, United States District Court for the District of New Jersey, sitting by designation.

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

Nos. 80-1405, 80-1450, 80-1496

In the Matter of:
The Complaint of Bankers Trust Company, et al. and Villaneuva Compania Naviera, S.A., et al. v. Bethlehem Steel Corporation, et al.

Bankers Trust Company, et al.,
Appellants at No. 80-1405
BP Oil Inc., et al.,
Appellants at No. 80-1450
Villaneuva Compania Naviera, SA.,
Appellant at No. 80-1496

Nos. 80-1494, 80-1495, 80-1497

In the Matter of:
Complaint of Villaneuva Compania Naveria, S.A., etc., et al.; National Grange Mutual Insurance Company v. Bethlehem Steel Corporation, et al. v. British Petroleum, Ltd., et al.

Bankers Trust Company, et al.,
Appellants at No. 80-1494
BP Oil Inc., et al.,
Appellants at No. 80-1495
Villaneuva Compania Naviera, S.A.,
Appellant at No. 80-1497

SUR PETITION FOR REHEARING

Present: SEITZ, *Chief Judge,* ALIDSERT, ADAMS, GIBBONS, WEIS, and HIGGINBOTHAM, *Circuit Judges,* and DEBEVOISE, *District judge.*°

The petition for rehearing filed by BP Oil, Inc. and Sohio Petroleum Company, Appellants in Nos. 80-1450 and 80-1495, in the above entitled cases having been submitted to the judges who participated in the decision of this court and to all the other available circuit judges of the circuit in regular active service, and no judge who concurred in the decision having asked for rehearing, and a majority of the circuit judges of the circuit in regular active service not having voted for rehearing by the court in banc, the petition for rehearing is denied.

BY THE COURT:

A. LEON HIGGINBOTHAM
Circuit Judge

Dated: July 8, 1981

° Honorable Dickinson R. Debevoise, United States District Court for the District of New Jersey, sitting by designation.

°° Judges Hunter, Garth and Sloviter did not participate in the disposition of this petition for rehearing.

SUPREME COURT OF THE UNITED STATES

No. A-265

BP OIL INC. AND SOHIO PETROLEUM COMPANY,

Petitioners,

v.

BANKERS TRUST COMPANY, ET AL.

ORDER EXTENDING TIME TO FILE PETITION FOR WRIT OF CERTIORARI

UPON CONSIDERATION of the application of counsel for petitioner(s),

IT IS ORDERED that the time for filing a petition for writ of certiorari in the above-entitled cause be, and the same is hereby, extended to and including December 5, 1981.

/s/ William J. Brennan, Jr.
Associate Justice of the Supreme
Court of the United States

Dated this 30 day of September, 1981

STATUTES INVOLVED

Limitation of Liability Act, 46 U. S. C. § 183

§ 183. Amount of liability; loss of life or bodily injury; privity imputed to owner; "seagoing vessel"

(a) The liability of the owner of any vessel, whether American or foreign, for any embezzlement, loss, or destruction by any person of any property, goods, or merchandise shipped or put on board of such vessel, or for any loss, damage, or injury by collision, or for any act, matter, or thing, loss, damage, or forfeiture, done, occasioned, or incurred, without the privity or knowledge of such owner or owners, shall not, except in the cases provided for in subsection (b) of this section, exceed the amount or value of the interest of such owner in such vessel, and her freight then pending.

(b) In the case of any seagoing vessel, if the amount of the owner's liability as limited under subsection (a) of this section is insufficient to pay all losses in full, and the portion of such amount applicable to the payment of losses in respect of loss of life or bodily injury is less than $60 per ton of such vessel's tonnage, such portion shall be increased to an amount equal to $60 per ton, to be available only for the payment of losses in respect of loss of life or bodily injury. If such portion so increased is insufficient to pay such losses in full, they shall be paid therefrom in proportion to their respective amounts.

(c) For the purposes of this section the tonnage of a seagoing steam or motor vessel shall be her gross tonnage without deduction on account of engine room, and the tonnage of a seagoing sailing vessel shall be her registered tonnage: *Provided*, That there shall not be included in such tonnage any space occupied by seamen or apprentices and appropriated to their use.

(d) The owner of any such seagoing vessel shall be liable in respect of loss of life or bodily injury arising on distinct occasions to the same extent as if no other loss of life or bodily injury had arisen.

(e) In respect of loss of life or bodily injury the privity or knowledge of the master of a seagoing vessel or of the superintendent or managing agent of the owner thereof, at or prior to the commencement of each voyage, shall be deemed conclusively the privity or knowledge of the owner of such vessel.

(f) As used in subsections (b), (c), (d), and (e) of this section and in section 183b of this title, the term "seagoing vessel" shall not include pleasure yachts, tugs, towboats, towing vessels, tank vessels, fishing vessels or their tenders, self-propelled lighters, non-descript self-propelled vessels, canal boats, scows, car floats, barges, lighters, or nondescript non-self-propelled vessels, even though the same may be seagoing vessels within the meaning of such term as used in section 188 of this title. R. S. § 4283; Aug. 29, 1935, c. 804, § 1, 49 Stat. 960; June 5, 1936, c. 521, § 1, 49 Stat. 1479.

Port and Tanker Safety Act of 1978
46 U. S. C. § 391a
Mode, Manner, and Extent of Inspection; Certificates; Records

§ 391a. Vessels carrying certain cargoes in bulk

(1) *Statement of policy.*—The Congress hereby finds and declares—

(A) that the carriage by vessels of certain cargoes in bulk or in residue creates substantial hazards to life, property, the navigable waters of the United States (including the quality thereof) and

the resources contained therein and to the adjoining land, including but not limited to fish, shellfish, and wildlife, marine and coastal eco-systems, and recreational and scenic values;

(B) that existing standards for the design, construction, alteration, repair, maintenance, operation, equipping, personnel qualification, and manning of all such vessels which use any port or place subject to the jurisdiction of the United States or which operate in the navigable waters of the United States must be more stringent and comprehensive for the mitigation of the hazards to life, property, and the marine environment;

(C) that existing international standards for inspection and enforcement are incomplete, that those international standards that are in existence are often left unenforced by some flag states, and that there is a need to prevent substandard vessels from using any port or place subject to the jurisdiction of the United States or from operating in the navigable waters of the United States, for the mitigation of the hazards to life, property, or the marine environment;

(D) that standards developed through regulations shall incorporate the best available technology and shall be required unless clearly shown to create an undue economic impact which is not outweighed by the benefits to navigation and vessel safety or protection of the marine environment;

(E) that standards developed through regulations shall not impede or interfere with the right of innocent passage or any legitimate use of the high seas in accordance with recognized principles of international law; and

(F) that the United States should continue to actively support and encourage efforts to obtain international agreements concerning navigation and vessel safety and protection of the marine environment.

(2) *Definitions.*—As used in this section, unless the context otherwise requires—

(A) "Discharge" includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping, however caused.

(B) "Foreign vessel" means any vessel of foreign registry or operated under the authority of any nation other than the United States.

(C) "Hazardous material" means any liquid material or substance which is—

(i) flammable or combustible; or

(ii) designated a hazardous substance under section 1321(b) of Title 33;

(iii) designated a hazardous material under section 1803 of Title 49; or

(iv) designated as a noxious liquid substance under Annex II of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973.

(D) "Marine environment" means the navigable waters of the United States and the land and resources therein and thereunder; the waters and fishery resources of any area over which the United States asserts exclusive fishery management authority; the seabed and subsoil of the Outer Continental Shelf of the United States, the resources thereof and the waters

superjacent thereto; and the recreational, economic, and scenic values of such waters and resources.

(E) "Oil" includes oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

(F) "Person" means any individual (whether or not a citizen or national of the United States), or any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any State), and any Federal, State, local, or foreign government or any entity of any such government.

(G) "Public vessel" means a vessel which—

(i) is owned, or chartered by demise, and operated by the United States or any foreign government; and

(ii) is not engaged in commercial service.

(H) "Commercial service" means all types of trade or business involving the transportation of goods or persons, excluding the service performed by combatant vessels.

(I) "Secretary" means the Secretary of the department in which the Coast Guard is operating.

(J) "State" includes each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the United States Virgins [1] Islands, the Trust Territories of the Pacific Islands, the Commonwealth of the Northern Marianas, and any other commonwealth, territory, or possession of the United States.

(K) "United States", when used in a geographical context, means all the States thereof.

(L) "Vessel of the United States" means any vessel documented or numbered under the laws of the United States.

(M) "Tanker" means a vessel constructed or adapted primarily to carry oil or hazardous materials in bulk in the cargo spaces.

(N) "Crude oil tanker" means a tanker engaged in the trade of carrying crude oil.

(O) "Product carrier" means a tanker engaged in the trade of carrying oil, other than crude oil.

(P) "Major conversion" means a conversion of an existing vessel which substantially alters the dimensions or carrying capacity of the vessel; or changes the type of vessel; or substantially prolongs its life; or which otherwise so alters the vessel that it is essentially a new vessel, as determined by the Secretary.

(Q) "New" means, with respect to various types of vessels subject to subsection (7), a vessel—

(i) for which the building contract is placed after June 1, 1979; or

(ii) in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction after January 1, 1980; or

(iii) the delivery of which is after June 1, 1982; or

(iv) which has undergone a major conversion, which is contracted for after June 1, 1979, or construction work of which is begun after January 1, 1980, or completed after June 1, 1982.

(R) "Existing" means, with respect to various types of vessels subject to subsection (7), a vessel which is not a new vessel.

(S) "Crude oil" means any liquid hydrocarbon mixture occurring naturally in the earth, whether or not treated to render it suitable for transportation, and includes crude oil from which certain distillate fractions may have been removed, and crude oil to which certain distillate fractions may have been added.

(3) *Applicability.*—Except as provided in subsections (4) and (5) this section shall apply to any vessel—

(A) regardless of tonnage, size, or manner of propulsion;

(B) whether self-propelled or not;

(C) whether carrying freight or passengers for hire or not;

(D) which is a vessel of the United States, or which operates on or enters the navigable waters of the United States, or which transfers oil or hazardous materials in any port or place subject to the jurisdiction of the United States; and

(E) which is constructed or adapted to carry, or which carries, oil or any hazardous materials in bulk as cargo or in residue.

Any such vessel shall be deemed to be a steam vessel for the purposes of title 52 of the Revised Statutes of the United States and shall be subject to the provisions thereof.

(4) *Exceptions.*—This section shall not apply to—

(A) any public vessel; or

(B) any vessel of not more than 500 gross tons, documented in the service of oil exploitation, which is not a tanker and which would be subject to this section only because of the transfer of fuel from fuel supply tanks of such vessels to offshore drilling or production facilities, if the crew member in charge of such transfer is certified as a tankerman: *Provided,* That if the crew member in charge of the transfer of fuel holds a valid license as a master, mate, pilot, engineer or operator, it shall not be necessary for the crew member also to be certificated as a tankerman or have a tankerman endorsement on his license; or

(C) cannery tenders, fishing tenders, and fishing vessels of not more than 500 gross tons, used in the salmon or crab fisheries of the State of Oregon, Washington, and Alaska, when engaged exclusively in the fishing industry; or

(D) any foreign vessel, not destined for, or departing from, a port or place subject to the jurisdiction of the United States, that is in innocent passage through the territorial sea of the United States or in transit through the navigable waters of the United States which form a part of an international strait.

(5) *Fish processing vessels.*—This section shall not apply to vessels of not more than 5,000 gross tons used in the processing and assembling of fishery products in the fisheries of the States of Oregon, Washington, and Alaska, and such vessels shall be allowed to have on board flammable or combustible liquid cargo in bulk to the extent authorized, and upon such conditions as may be required, by regulations issued by the Secretary.

(6) *Regulatory authority.*—

(A) In accordance with the provisions of section 553 of Title 5, the Secretary shall issue, and may from time to time amend or repeal, regulations for the design, construction, alteration, repair, maintenance, operation, equipping, personnel qualification, or manning of vessels to which this section applies, as may be necessary for increased protection against hazards to life and property, for navigation and vessel safety, and for enhanced protection of the marine environment. The Secretary may issue differing regulations applicable to vessels engaged in the domestic trade, and may also issue regulations that exceed standards agreed upon internationally. The regulations issued by the Secretary under this subsection shall be in addition to any other regulations, issued under other provisions of law, that may apply to such vessels. The regulations issued by the Secretary under this subsection shall include, but need not be limited to, requirements relating to—

(i) superstructures, hulls, cargo holds or tanks, fittings, equipment, appliances, propulsion machinery, auxiliary machinery, and boilers;

(ii) the handling or stowage of cargo, the manner of such handling or stowage of cargo, and the machinery and appliances used in such handling or stowage;

(iii) equipment and appliances for lifesaving, fire protection, and prevention and mitigation of damage to the marine environment;

(iv) the manning of such vessels and the duties, qualifications, and training of the officers and crew thereof, in accordance with subsections (9), (10), and (11);

(v) improvements in vessel maneuvering and stopping ability and other features which reduce the possibility of collision, grounding, or other accidents;

(vi) the reduction of cargo loss in the event of a collision, grounding, or other accident; and

(vii) the reduction or elimination of discharges during ballasting, deballasting, tank cleaning, cargo handling, or other such activity.

(B) In issuing regulations under paragraph (A), the Secretary shall give due consideration to the kinds and grades of cargo permitted to be on board such vessel.

(C) The Secretary, in the exercise of this regulatory authority, shall establish procedures for consulting with, and receiving and considering the views of—

(i) interested Federal departments and agencies,

(ii) officials of State and local governments,

(iii) representatives of the maritime community,

(iv) representatives of port and harbor authorities or associations,

(v) representatives of environmental groups, and

(vi) any other interested parties who are knowledgeable or experienced in dealing with problems involving vessel safety, port and waterways safety, and protection of the marine environment.

(7) *Minimum standards.*—In issuing regulations pursuant to subsection (6), the Secretary shall require that any self-propelled vessel shall, as a minimum—

(A) If a new crude oil tanker of 20,000 deadweight tons or above, be equipped with—

(i) segregated ballast tanks which are protectively located;

(ii) a crude oil washing system; and

(iii) a cargo tank protection system, consisting of a fixed deck froth system and a fixed inert gas system;

(B) if a new product carrier of 30,000 deadweight tons or above, be equipped with segregated ballast tanks which are protectively located;

(C) if a new product carrier of 20,000 deadweight tons or above, be equipped with a cargo tank protection system consisting of a fixed deck froth system and a fixed inert gas system or, if such a product carrier carries dedicated products which are incompatible with such a cargo tank protection system, an alternate protection system as authorized by the Secretary;

(D) if an existing crude oil tanker of 40,000 deadweight tons or above, not later than June 1, 1981, be equipped with—

(i) segregated ballast tanks; or

(ii) a crude oil washing system:

Provided, That compliance may be delayed for vessels operating with dedicated clean ballast tanks if of 70,000 deadweight tons or above until June 1, 1983, or until June 1, 1985, for all other such vessels;

(E) if an existing crude oil tanker of 20,000 deadweight tons or above but less than 40,000 deadweight tons, fifteen years or older, not later than January 1, 1986, or the date on which it reaches fifteen years of age, whichever is later, be equipped with segregated ballast tanks or a crude oil washing system;

(F) if an existing crude oil tanker of 20,000 deadweight tons or above, not later than June 1, 1983, be equipped with an inert gas system: *Provided,* That for a crude oil tanker of less than 40,000 deadweight tons not fitted with high capacity tank washing machines, the Secretary may grant an exemption, if the vessel's owner can clearly show that compliance would be unreasonable and impracticable due to the vessel's design characteristics: *Provided further,* That an existing crude oil tanker of 70,000 deadweight tons or above must be in compliance herewith not later than June 1, 1981;

(G) if an existing product carrier of 40,000 deadweight tons or above, not later than June 1, 1981, be equipped with segregated ballast tanks or, in lieu thereof, may operate with dedicated clean ballast tasks;

(H) if an existing product carrier of 20,000 deadweight tons or above but less than 40,000 deadweight tons, fifteen years or older, not later than January 1, 1986, or the date on which it reaches fifteen years of age, whichever is later, be equipped with segregated ballast tanks or may operate with dedicated clean ballast tanks;

(I) if an existing product carrier of 40,000 deadweight tons or above, or an existing product carrier of

20,000 deadweight tons or above but less than 40,000 deadweight tons, which is fitted with high-capacity tank washing machines, not later than June 1, 1983, be equipped with an inert gas system: *Provided*, That an existing product carrier of 70,000 deadweight tons or above must be in compliance herewith not later than June 1, 1981;

(J) if of 10,000 gross tons or above, not later than June 1, 1979, be equipped with—

(i) a dual radar system, with short-range and with long-range capabilities and each with true-north features;

(ii) an electronic relative motion analyzer, which is at least functionally equivalent to such equipment complying with specifications established by the United States Maritime Administration;

(iii) an electronic position fixing device;

(iv) adequate communications equipment;

(v) a sonic depth finder;

(vi) a gyrocompass; and

(vii) up-to-date charts:

Provided, That the effective date of compliance with the requirement of clause (ii) shall be July 1, 1982 or such earlier date as agreed to internationally and accepted by the United States;

(K) if a new tanker of 10,000 gross tons or above, be equipped with—

(i) two remote steering gear control systems operable separately from the navigating bridge;

(ii) main steering gear control in the steering gear compartment;

(iii) means of communications and rudder angle indicators on the navigating bridge, remote steering gear control station, and the steering gear compartment;

(iv) two or more identical and adequate power units for the main steering gear;

(v) an alternative and adequate power supply, either from an emergency source of electrical power or from another independent source of power located in the steering gear compartment; and

(vi) means of automatic starting and stopping of power units with attendant alarms at all steering stations;

(L) if an existing tanker of 10,000 gross tons or above, not later than June 1, 1981, be equipped with—

(i) two remote steering gear control systems operable separately from the navigating bridge;

(ii) main steering gear control in the steering gear compartment; and

(iii) means of communications and rudder angle indicators on the navigating bridge, remote steering gear control station, and the steering gear compartment; and

(M) if a crude oil tanker, which is engaged in the transfer of oil from an offshore oil exploitation or production facility on the Outer Continental Shelf of the United States, not later than June 1, 1980, be

equipped with segregated ballast tanks, or may operate with dedicated clean ballast tanks or special ballast arrangements: *Provided,* That vessels subject to this paragraph shall comply fully with the other minimum standards of this section, where applicable; and

(N) in accordance with relevant international agreements to which the United States is a party, exempt vessels from the minimum requirements established in this subsection for segregated ballast, dedicated clean ballast, or crude oil washing if he determines that shore-based reception facilities are a preferred method of handling dirty ballast, and that adequate facilities are readily available.

After October 17, 1978, the installation of segregated ballast tanks, a crude oil washing system, or an inert gas system, required by regulations issued hereunder, on a vessel which is entitled to engage in coastwise trade in accordance with section 883 of this title shall be effected within the United States, in territories (not including trust territories), or its possessions, and vessels which fail to comply with this requirement shall thereafter not have the right to engage in the coastwise trade.

(8) *Evidence of compliance.*—

(A) No vessel of the United States to which this section applies shall have on board oil or hazardous materials in bulk as cargo or in residue until it has a Certificate of Inspection, issued under the provisions of title 52 of the Revised Statutes of the United States, and such certificate has been endorsed to indicate that the vessel is in compliance with the regulations issued under this section. If any such vessel is found not to be in compliance, the Secretary shall notify the

owner or agent of the vessel and indicate how the vessel may be brought into compliance.

(B) No foreign vessel to which this section applies shall operate on or enter the navigable waters of the United States, or transfer oil or hazardous materials in any port or place under the jurisdiction of the United States, unless such vessel has been issued a Certificate of Compliance by the Secretary. The Secretary shall not issue such certificate until the vessel has been examined by the Secretary and found to be in compliance with the provisions of this section and the regulations issued hereunder. If such vessel is found not to be in compliance, the Secretary shall notify the owner or agent of the vessel and indicate how the vessel may be brought into compliance. The Secretary may allow provisional entry for the purposes of conducting examinations.

(C) The Secretary may accept, in whole or in part, a certificate, endorsement, or document issued by any foreign nation pursuant to any treaty, convention, or other international agreement to which the United States is a party, as a basis for issuance of a Certificate of Compliance.

(D) No vessel may carry any kind or grade of oil or hazardous materials in bulk as cargo or in residue unless its certificate is endorsed to allow such carriage. No such certificate may allow any vessel to carry any material prohibited by section 170(3) of this title.

(E) A certificate issued under this section shall be valid for a period not to exceed twenty-four months and may be renewed as specified by the Secretary. The Secretary may issue a temporary cer-

tificate under this section in appropriate circumstances; except that the temporary certificate shall be valid for not more than thirty days. Any certificate shall be revoked or suspended if the Secretary finds that the vessel involved no longer complies with the conditions upon which the certificate was issued.

(9) *Personnel and manning standards for vessels of the United States.*—The Secretary shall prescribe standards for the manning of any vessel of the United States subject to the provisions of this section and the duties, qualifications, and training of the officers and crew thereof, including, but not limited to, standards relating to—

(A) instruction in vessel and cargo handling and vessel navigation under normal operating conditions in coastal and confined waters on the high seas;

(B) instruction in vessel and cargo handling and vessel navigation in emergency situations and under accidental or potential accident conditions;

(C) license qualifications by specific type and size of vessels;

(D) qualifications for licenses by use of simulators for the practice or demonstration of marine-oriented skills;

(E) minimum health and physical fitness criteria for various grades of licenses and certificates: *Provided,* That the Secretary shall waive the applicability of such criteria to any individual holding a license or certificate in effect on October 17, 1978, including subsequent renewals thereof: *Provided further,* That, when such a waiver is granted, the Secretary may prescribe conditions or limitations to the license or certificate, or the renewal thereof, as he may find

reasonable and necessary for the safety of any vessel on which the individual may be employed;

(F) periodic retraining, and special training for upgrading positions, changing vessel type or size, or assuming new responsibilities; and

(G) determination of licenses and certificates, conditions of licensing or certification and period of licensing or certification by reference to experience, amount of training completed, and regular performance testing.

(10) *Tankerman requirements.*—

(A) Any vessel of the United States having on board oil or hazardous materials in bulk as cargo or in residue shall have a specified number of the crew certificated as tankerman, as may be required by the Secretary, and such requirement shall be so noted on the Certificate of Inspection issued to the vessel.

(B) Any foreign vessel having on board oil or hazardous materials in bulk as cargo or in residue shall have a special number of personnel certificated as tankerman, or equivalent, as may be required by the Secretary, when the vessel transfers oil or hazardous materials in any port or place subject to the jurisdiction of the United States; and such requirement shall be noted in applicable terminal operating procedures. No transfer operations may take place unless the crew member in charge is capable of clearly understanding instructions in English.

(C) The Secretary shall prescribe procedures, standards, and qualifications for the issuance of certificates or endorsements as tankerman, stating the kinds of oil or hazardous materials that can be han-

dled with safety to the vessel and the marine environment.

(D) Certificates or endorsements as tankerman shall be subject to suspension and revocation on the same grounds and in the same manner as provided for under the provisions of section 239 of this title.

(11) *Personnel and manning standards for foreign vessels.*—The Secretary shall issue regulations and procedures for the verification of manning, training, qualification, and watchkeeping standards promulgated by the certificating state of any foreign vessel which operates on or enters the navigable waters of the United States, and transfers oil or hazardous materials in any port or place under the jurisdiction of the United States. Such regulations and procedures shall include, but need not be limited to, provisions relating to—

(A) the receipt through the Inter-Governmental Maritime Consultative Organization or from the certificating state of the English text of laws, decrees, orders, regulations, specimen licenses and certificates, and other pertinent documents pertaining to manning, training, qualification, and watchkeeping of seafarers;

(B) the publication and distribution of, or otherwise making available to the public and appropriate enforcement personnel, copies of materials received as provided for in paragraph (A);

(C) the evaluation, at intervals of not less than five years, of each foreign state's system for licensing and certification of seafarers, including study course content and duration, examination requirements and prerequisites for licensing and certification, and related controls;

(D) determination, after the evaluation required by clause (C), of whether the foreign state, whose system for licensing and certification of seafarers was evaluated, has standards which are comparable to or more stringent than United States standards or international standards which are accepted by the United States;

(E) publication in the Federal Register of each determination made pursuant to clause (D), together with a brief explanation of the reasons therefor; and

(F) manning levels, based on vessel size and type of operation, when operating in the navigable waters of the United States, or in the safety zone in connection with utilization of deepwater ports.

(12) *Modifications.*—The Secretary may modify any regulation or standard prescribed under this section to conform to the provisions of an international treaty, convention, agreement, or an amendment thereto, which is ratified by the United States.

(13) *Prohibited acts.*—

(A) It is unlawful for any person—

(i) to violate any provision of this section or any regulation issued under this section; or

(ii) to refuse to permit any officer, authorized by the Secretary to enforce the provisions of this section, to board any vessel or to enter any shore area, place, or premises, under such person's control for purposes of inspection under this section; or

(iii) to refuse to obey any lawful directive issued under this section.

(B) It is unlawful for any vessel subject to the provision of this section—

(i) to operate in or on the navigable waters of the United States, or to use any port or place subject to the jurisdiction of the United States, while not in compliance with any provision of this section or any regulation issued hereunder; or

(ii) to fail to comply with any lawful directive issued pursuant to this section.

(14) *Enforcement.*—

(A) *Civil penalty.*—

(i) Any person who is found by the Secretary, after notice and an opportunity for a hearing, to have violated this section or a regulation issued hereunder shall be liable to the United States for a civil penalty, not to exceed $25,000 for each violation. Each day of a continuing violation shall constitute a separate violation. The amount of such civil penalty shall be assessed by the Secretary, or his designee, by written notice. In determining the amount of such penalty, the Secretary shall take into account the nature, circumstances, extent, and gravity of the prohibited acts committed and, with respect to the violator, the degree of culpability, any history of prior offenses, ability to pay, and such other matters as justice may require.

(ii) The Secretary may compromise, modify, or remit, with or without conditions, any civil penalty which is subject to imposition or which has been imposed under this section.

(iii) If any person fails to pay an assessment of a civil penalty after it has become final, the Secretary may refer the matter to the Attorney General of the United States, for collection in any appropriate district court of the United States.

(B) Criminal penalty.—

(i) Any person who willfully and knowingly violates this section or any regulation issued hereunder shall be fined not more than $50,000 for each violation or imprisoned for not more than five years, or both.

(ii) Any person who, in the willful and knowing violation of this section or any regulation issued hereunder, uses a dangerous weapon, or engages in conduct that causes bodily injury or fear of imminent bodily injury to any officer authorized to enforce the provisions of this Act or the regulations issued hereunder, shall, in lieu of the penalties prescribed in subparagraph (i), be fined not more than $100,000, or imprisoned for not more than ten years, or both.

(C) In rem liability.—Any vessel subject to the provisions of this section, which is used in violation of this section or any regulation issued hereunder, shall be liable in rem for any civil penalty assessed pursuant to paragraph (A) and may be proceeded against in the United States district court for any district in which such vessel may be found.

(D) Injunction.—The United States district courts shall have jurisdiction to restrain violations of this section or of regulations issued hereunder, for cause shown.

(E) *Withholding clearance.*—The Secretary of the Treasury shall withhold or revoke, at the request of the Secretary, the clearance, required by section 91 of this title, of any vessel, the owner or operator of which is subject to any of the penalties in this subsection. Clearance may be granted in such cases upon the filing of a bond or other surety satisfactory to the Secretary.

(15) *Inspection.*—

(A) *National program.*—

(i) The Secretary shall establish a national program for inspection of any vessel subject to this section. Each such vessel shall be inspected or examined at least once each year. Any such vessel over ten years of age shall undergo a special and detailed inspection of structural strength and hull integrity, as specified by the Secretary.

(ii) An inspection or examination may be conducted by any officer authorized by the Secretary. If any such officer is not reasonably available, the Secretary may contract for the conduct of inspections or examinations in the United States and in foreign countries. Under such contract, an inspector may be authorized to act on behalf of the Secretary, except that no such inspector may issue a Certificate of Inspection or Certificate of Compliance, but may issue a temporary certificate.

(iii) Notwithstanding the provisions of section 331 of this title, the Secretary shall prescribe by regulation reasonable fees for any inspection

or examination conducted pursuant to this section outside the geographical limits of the United States, or which, when involving a foreign vessel, is conducted pursuant to the contract authority provided for in subparagraph (ii) of this paragraph. The owner or operator of any vessel inspected or examined by the Secretary or his designee shall be liable for such fees. Amounts received as fees shall be credited to the General Treasury.

(B) *Vessel documents.*—Any vessel subject to the provisions of this section shall have on board such documents as the Secretary deems necessary for inspection or enforcement under this section, including, but not limited to, documents indicating—

(i) the kind, grade, and approximate quantities of any cargo on board;

(ii) the shipper and consignee of the cargo;

(iii) the points of origin and destination of the vessel; and

(iv) the name of an agent in the United States authorized to accept legal process.

(16) *Marine safety information system.*—

(A) *In general.*—The Secretary shall establish a marine safety information system which shall contain information with regard to any vessel subject to this section which operates on or enters the navigable waters of the United States, or which transfers oil or any hazardous materials in any port or place under the jurisdiction of the United States. In acquiring such information, the Secretary shall make full use of publicly available information. The Secretary

may, by regulation, require any such vessel to furnish such data or other information as he deems necessary, in order to carry out the purposes of this subsection, including, but not limited to—

(i) the names of any person with an ownership interest in such vessel;

(ii) details of compliance with the financial responsibility requirements of applicable statutes or regulations;

(iii) registration information, including all changes in the name of the vessel;

(iv) the history of accidents or serious repair problems of the vessel; and

(v) a record of all inspections or examinations of a vessel conducted under subsection (15).

(B) *Interagency cooperation.*—The head of each department or agency of the Federal Government shall, upon a written request from the Secretary, furnish any available information which the Secretary deems necessary to confirm the information received pursuant to paragraph (A).

(17) *Lightering.*—

(A) *In general.*—After the effective date of regulations issued by the Secretary pursuant to paragraph (B), no vessel may transfer oil or hazardous materials in a port or place subject to the jurisdiction of the United States, if the cargo has been transferred from another vessel in the navigable waters of the United States or in the marine environment unless—

(i) the transfer was conducted in accordance with regulations issued by the Secretary, and

(ii) both the delivering and receiving vessels had, on board at the time of transfer, a Certificate of Inspection or a Certificate of Compliance, as would have been required under subsection (8), had the transfer taken place in a port or place subject to the jurisdiction of the United States.

(B) *Regulations.*—The Secretary shall issue, and may from time to time, amend or repeal regulations for the transferring of oil or hazardous materials in the navigable waters of the United States or in the marine environment when such oil or hazardous material is destined for a port or place subject to the jurisdiction of the United States. Such regulations shall include, but need not be limited to—

(i) minimum safe operating conditions, including sea state, wave height, weather, proximity to channels or shipping lanes, and other similar factors;

(ii) prevention of spills;

(iii) equipment for responding to any spill;

(iv) prevention of any unreasonable interference with navigation or other reasonable uses of the high seas, as such uses are defined by treaty, convention, or customary international law;

(v) establishment of lightering zones; and

(vi) requirements for communication and prearrival messages.

(18) *Tank washings.*—

(A) No vessel may transfer a cargo in a port or place subject to the jurisdiction of the United States,

if the vessel has arrived after having discharged tank washings containing oil or hazardous materials in violation of any law of the United States or in a manner or quantities inconsistent with the provisions of any treaty to which the United States is a party, in preparation for loading that cargo in any port or place subject to the jurisdiction of the United States.

(B) The Secretary shall establish effective control and supervisory measures to implement the provisions of this subsection.

(19) *Report.*—Within six months after the end of each calendar year, the Secretary shall submit to the Congress—

(A) a report on the administration of this section during the preceding calendar year:

(B) a summary of inspection and enforcement during the preceding calendar year; and

(C) recommendations to the Congress for any additional legislative authority necessary to improve navigation and vessel safety and protection of the marine environment.

33 U. S. C. § 1221

§ 1221. Statement of policy

The Congress finds and declares—

(a) that navigation and vessel safety and protection of the marine environment are matters of major national importance;

(b) that increased vessel traffic in the Nation's ports and waterways creates substantial hazard to life, property, and the marine environment;

(c) that increased supervision of vessel and port operations is necessary in order to—

(1) reduce the possibility of vessel or cargo loss, or damage to life, property, or the marine environment;

(2) prevent damage to structures in, on, or immediately adjacent to the navigable waters of the United States or the resources within such waters;

(3) insure that vessels operating in the navigable waters of the United States shall comply with all applicable standards and requirements for vessel construction, equipment, manning, and operational procedures; and

(4) insure that the handling of dangerous articles and substances on the structures in, on, or immediately adjacent to the navigable waters of the United States is conducted in accordance with established standards and requirements; and

(d) that advance planning is critical in determining proper and adequate protective measures for the Nation's ports and waterways and the marine environment, with continuing consultation with other Federal agencies, State representatives, affected users, and the general public, in the development and implementation of such measures.

33 U. S. C. § 1222

§ 1222. Definitions

As used in this chapter, unless the context otherwise requires—

(1) "Marine environment" means the navigable waters of the United States and the land and resources therein and thereunder; the waters and fishery resources of any area over which the United States asserts exclusive fishery management authority; the seabed and subsoil of the Outer Continental Shelf of the United States, the resources thereof and the waters superjacent thereto; and the recreational, economic, and scenic values of such waters and resources.

(2) "Secretary" means the Secretary of the department in which the Coast Guard is operating.

(3) "State" includes each of several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, American Samoa, the United States Virgin Islands, the Trust Territories of the Pacific Islands, the Commonwealth of the Northern Marianas, and any other commonwealth, territory, or possession of the United States.

(4) "United States", when used in geographical context, means all the States thereof.

33 U. S. C. § 1225

§ 1225. Waterfront safety

(a) *In general*—The Secretary may take such action as is necessary to—

(1) prevent damage to, or the destruction of, any bridge or other structure on or in the navigable waters of the United States, or any land structure or shore area immediately adjacent to such waters; and

(2) protect the navigable waters and the resources therein from harm resulting from vessel or

structure damage, destruction, or loss. Such action may include, but not be limited to—

(A) establishing procedures, measures, and standards for the handling, loading, unloading, storage, stowage, and movement on the structure (including the emergency removal, control, and disposition) of explosives or other dangerous articles and substances, including oil or hazardous material as those terms are defined in section 391a of Title 46;

(B) prescribing minimum safety equipment requirements for the structure to assure adequate protection from fire, explosion, natural disaster, and other serious accidents or casualties;

(C) establishing water or waterfront safety zones, or other measures for limited, controlled, or conditional access and activities when necessary for the protection of any vessel, structure, waters, or shore area; and

(D) establishing procedures for examination to assure compliance with the requirements prescribed under this section.

(b) *State law.*—Nothing contained in this section, with respect to structures, prohibits a State or political subdivision thereof from prescribing higher safety equipment requirements or safety standards than those which may be prescribed by regulations hereunder.

33 U. S. C. § 1228

§ 1228. Conditions for entry to ports in the United States

(a) *In general.*—No vessel, subject to the provisions of section 391a of Title 46, shall operate in the navigable

waters of the United States or transfer cargo or residue in any port or place under the jurisdiction of the United States, if such vessel—

(1) has a history of accidents, pollution incidents, or serious repair problems which, as determined by the Secretary, creates reason to believe that such vessel may be unsafe or may create a threat to the marine environment; or

(2) fails to comply with any applicable regulation issued under this chapter, section 391a of Title 46, or under any other applicable law or treaty; or

(3) discharges oil or hazardous materials in violation of any law of the United States or in a manner or quantities inconsistent with the provisions of any treaty to which the United States is a party; or

(4) does not comply with any applicable vessel traffic service requirements; or

(5) is manned by one or more officers who are licensed by a certificating state which the Secretary has determined, pursuant to section 391a(11) of Title 46, does not have standards for licensing and certification of seafarers which are comparable to or more stringent than United States standards or international standards which are accepted by the United States; or

(6) is not manned in compliance with manning levels as determined by the Secretary to be necessary to insure the safe navigation of the vessel; or

(7) while underway, does not have at least one licensed deck officer on the navigation bridge who is capable of clearly understanding English.

(b) Exceptions.—The Secretary may allow provisional entry of a vessel not in compliance with subsection (a) of this section, if the owner or operator of such vessel proves, to the satisfaction of the Secretary, that such vessel is not unsafe or a threat to the marine environment, and if such entry is necessary for the safety of the vessel or persons aboard. In addition paragraphs (1), (2), (3), and (4) of subsection (a) of this section shall not apply if the owner or operator of such vessel proves, to the satisfaction of the Secretary, that such vessel is no longer unsafe or a threat to the marine environment, and is no longer in violation of any applicable law, treaty, regulation or condition, as appropriate. Clauses (5) and (6) of subsection (a) of this section shall become applicable eighteen months after October 17, 1978.

33 U. S. C. § 1230

§ 1230. International agreements

(a) *Transmittal of regulations.*—The Secretary shall transmit, via the Secretary of State, to appropriate international bodies or forums, any regulations issued under this chapter, for consideration as international standards.

(b) *Agreements.*—The President is authorized and encouraged to—

(1) enter into negotiations and conclude and execute agreements with neighboring nations, to establish compatible vessel standards and vessel traffic services, and to establish, operate, and maintain international vessel traffic services, in areas and under circumstances of mutual concern; and

(2) enter into negotiations, through appropriate international bodies, and conclude and execute agreements to establish vessel traffic services in appropriate areas of the high seas.

(c) *Operations.*—The Secretary, pursuant to any agreement negotiated under subsection (b) of this section which is binding upon the United States in accordance with constitutional requirements, may—

(1) require vessels in the vessel traffic service area to utilize or to comply with the vessel traffic service, including the carrying or installation of equipment and devices as necessary for the use of the service; and

(2) waive, by order or regulation, the application of any United States law or regulation concerning the design, construction, operation, equipment, personnel qualifications, and manning standards for vessels operating in waters over which the United States exercises jurisdiction if such vessel is not en route to or from a United States port or place, and if vessels en route to or from a United States port or place are accorded equivalent waivers of laws and regulations of the neighboring nation, when operating in waters over which that nation exercises jurisdiction.

33 U. S. C. § 1231

§ 1231. Regulations

(a) *In general.*—In accordance with the provisions of section 553 of Title 5, the Secretary shall issue, and may from time to time amend or repeal, regulations necessary to implement this chapter.

(b) *Procedures.*—The Secretary, in the exercise of this regulatory authority, shall establish procedures for consulting with, and receiving and considering the views of all interested parties, including—

(1) interested Federal departments and agencies,

(2) officials of State and local governments,

(3) representatives of the maritime community,

(4) representatives of port and harbor authorities or associations,

(5) representatives of environmental groups,

(6) any other interested parties who are knowledgeable or experienced in dealing with problems involving vessel safety, port and waterways safety, and protection of the marine environment, and

(7) advisory committees consisting of all interested segments of the public when the establishment of such committees is considered necessary because the issues involved are highly complex or controversial.

33 U. S. C. § 1232

§ 1232. Enforcement provisions

(a) *Civil penalty.*—(1) Any person who is found by the Secretary, after notice and an opportunity for a hearing, to have violated this chapter or a regulation issued hereunder shall be liable to the United States for a civil penalty, not to exceed $25,000 for each violation. Each day of a continuing violation shall constitute a separate violation. The amount of such civil penalty shall be assessed by the Secretary, or his designee, by written notice. In determining the amount of such penalty, the Secretary shall take into account the nature, circumstances, extent and gravity of the prohibited acts committed and, with respect to the violator, the degree of culpability, any

history of prior offenses, ability to pay, and such other matters as justice may require.

(2) The Secretary may compromise, modify, or remit, with or without conditions, any civil penalty which is subject to imposition or which has been imposed under this section.

(3) If any person fails to pay an assessment of a civil penalty after it has become final, the Secretary may refer the matter to the Attorney General of the United States, for collection in any appropriate district court of the United States.

(b) *Criminal penalty.*—(1) Any person who willfully and knowingly violates this chapter or any regulation issued hereunder shall be fined not more than $50,000 for each violation or imprisoned for not more than five years, or both.

(2) Any person who, in the willful and knowing violation of this chapter or of any regulation issued hereunder, uses a dangerous weapon, or engages in conduct that causes bodily injury or fear of imminent bodily injury to any officer authorized to enforce the provisions of this chapter or the regulations issued hereunder, shall, in lieu of the penalties prescribed in paragraph (1), be fined not more than $100,000, or imprisoned for not more than ten years, or both.

(c) *In rem liability.*—Any vessel subject to the provisions of this chapter, which is used in violation of this chapter, or any regulations issued hereunder, shall be liable in rem for any civil penalty assessed pursuant to subsection (a) of this section and may be proceeded against in the United States district court for any district in which such vessel may be found.

(d) *Injunction.*—The United States district courts shall have jurisdiction to restrain violations of this chapter or of regulations issued hereunder, for cause shown.

(e) *Denial of entry.*—Except as provided in section 1228 of this title, the Secretary may, subject to recognized principles of international law, deny entry into the navigable waters of the United States or to any port or place under the jurisdiction of the United States to any vessel not in compliance with the provisions of this chapter or the regulations issued hereunder.

(f) *Withholding of clearance.*—The Secretary of the Treasury shall withhold or revoke, at the request of the Secretary, the clearance, required by section 91 of Title 46, of any vessel, the owner or operator of which is subject to any of the penalties of this section. Clearance may be granted in such cases upon the filing of a bond or other surety satisfactory to the Secretary.